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Vliv sektoru informačních technologií na ekonomický rozvoj Srí Lanky

The Influence of the Information Technology Industry on an Economic Development of
Sri Lanka

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3. Description of the Srí Lanka economic situation and characterization of the IT industry in Srí Lanka
4. Analysis of the influence of the IT industry on an economic development of Srí Lanka
5. Proposition on maximizing the potential of the IT industry towards an economic development of Srí Lanka
6. Conclusion

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List of abbreviations

Declaration of the use of the Master's thesis' results

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References:


- ČIHÁK, Martin and Tomáš HOLUB. *Teorie růstové politiky*. Praha: VŠE v Praze, 2000. 170 s. ISBN 80-245-0126-0.
- JUREČKA, Václav et al. *Makroekonomie*. Praha: Grada Publishing, a. s., 2010. ISBN 978-80-247-3258-9.
- MANSELL, Robin and Uta WEHN. *Knowledge Societies: Information Technology for Sustainable Development*. Oxford: Oxford University Press, 1998. 323 s. ISBN 9789211007718.
- RODRIK, Dani. *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*. Princeton: Princeton University Press, 2007. 255 s. ISBN 978-0-691-12951-8.

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„Prohlašuji, že jsem celou diplomovou práci včetně příloh vypracoval samostatně a uvedl jsem veškerou použitou literaturu a další prameny.“

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1. Introduction

Sri Lanka is a developing country with an unlucky history. It is only 5 years since a civil war between the armed forces of the Government of Sri Lanka and a terrorist group LTTE ended and left half of the island in a bad condition.

Next to this fact, Sri Lanka is a hidden gem for IT and knowledge outsourcing which is still yet to be discovered. This sector certainly has a potential to drive economic growth of the country.

The objective of my thesis is to find out what is the influence the ICT sector in Sri Lanka has on its economic development. I want to analyze the influence on the economic growth of Sri Lanka, as well as the influence on the development of war-affected northern provinces and their integration with more developed capital city and southern provinces.

The first chapter will give an overview of theoretical framework of the problematics, while the next one will describe the economic situation of Sri Lanka and characterize the ICT sector.

The third chapter will consist of an analysis of the influence the sector has on the economic development. I will explain competitive advantages the ICT sector has on global scene, I will analyze the influence this sector has on macroeconomical indicators, and later on I will explain the impact on the development of northern provinces.

In the last chapter I will come up with proposals that can help in maximizing the potential Sri Lanka has thanks to the ICT sector.

2. Theoretical framework of economic and regional development

2.1. Economic development

According to Cameron (1996) economic development means a growth together with significant structural and organizational changes in the economy. Economic development is a process of raising the potential of the national economy, in other words, the growth of the potential product. It is a result of capital changes and changes in the intensity of using them. The main capitals are human resources, natural resources, funds, and technological advancement.

Nafziger (2006) explains that it is broader social-economic process that includes the development of economic base, changes in the economy's structure with stronger modern ways of production, increasing social securities and growth of the quality of the human factor. Industrialization plays an important role, because it leads to the importance of industry in the economy. Economic development is long-term increasing of the economic wealth or economic well-being of a country. These can be characterized, next to indicators per capita, also by other economic indicators (health care, education, etc.) that capture broader social impacts of raising the country's economic well-being.

In modern age there is an opinion, the economic development can not be specified by a single definition. The category is too broad, it is necessary to include economical, political and social aspects in many science disciplines. The term economic development means the dynamics of the development of particular societies. If we need to compare the development of these societies, we need to differentiate and specify regions, that are possible to be compared. This is how we differentiate groups of most developed countries, emerging markets, and least developed nations. Only countries within these groups can be compared objectively, without misrepresenting the situation.

[1]

While development is a broad concept entailing the raising of human capabilities in general, increasing economic growth rates is the central challenge that developing nations face. Higher standards of living are the most direct route to improvements in social and human indicators. Also, trying to come up with an identical growth strategy for all countries, regardless of their circumstances, is unlikely to prove productive. [80]

2.2. Regional development

Regional Economics is a discipline questioning how the disparities between regions arise and why they persist over time. It questions what factors determine regional output and regional employment, why is regional income per capita higher in some regions than others, why does the growth of labour productivity vary between regions, and many others. [3]

Regional development can be understood in two ways, practical and academical. The practical point of view describes regional development as raising the potential of a particular systematically determined area. The potential is originated as a consequence of spacial optimization of socio-economic activities and the use of natural resources. The academical point of view understands regional development as application of theories, mainly economy, geography and sociology, solving phenomena, processes, relationships of systematically determined area, that are influenced by natural-geographical, economic, and social conditions of the particular region. [7]

The role of regions in national economies has changed significantly in recent times and that is a result of globalization and structural adjustment. In the 1970s came dramatic forces that were generating new processes of change that have reshaped many regions and their economies. New technologies set the world on the path towards the information age of knowledge-based industries, with their requirements for new types of highly skilled, flexible labour, management and strategic alliances that are all highly mobile. After the fall of the Bretton Woods Agreement, the world has begun a new environment of floating exchange rates as the world entered new era of financial deregulation and globalization of capital markets. International agreements have been

forged breaking down trade barriers as the world moved from an era of protectionism to a new one of competition in the new global economy. [4]

3. Description of the Sri Lankan economic situation and characterization of the IT industry in Sri Lanka

3.1. History of Sri Lanka

3.1.1. History

Democratic Socialist Republic of Sri Lanka is an island country in Indian Ocean south next to the South east coast of India. Sri Lanka has population of over 21 million living in area slightly smaller than Czech Republic - 65,610 sq km. Major languages are Sinhala, Tamil and English. Monetary unit is Sri Lankan rupee and Capital and largest city is Colombo. [27]

The country becomes independent republic within the British Commonwealth in 1948 and the name was changed to Sri Lanka (Ceylon before) in 1972. Sri Lanka means “resplendent island” in Sanskrit language which is the philosophical language of Buddhism and Hinduism.

Population

Sinhalese Buddhists make a 70% majority of population. Sri Lanka has a longest continuous history of Buddhism among all Buddhist countries and is also known of its religious tolerance. Next to Buddhists it is Hindus, Muslims and Christians, who can be found in Sri Lanka.

Hindus (mainly Tamils) are about 12.6% of population and live mainly in the north of the country close to India. Muslims make up around 9.7% of population and they have been in Sri Lanka since 15th century when Arabs dominated Indian Ocean trade. In the same century Christians’ population (7.4%) began growing with the arrival of European missionaries.

History

Sri Lanka has 2500 years of recorded civilization history. It begins with the occupation of the island by civilized men in 5th century BC. The Buddhism was

introduced in the 3rd century BC. Sri Lanka had always been an important port and trading post in the ancient world. Sri Lanka's history can be divided into 3 main periods – Historical, Colonial and Modern. [9]

In historical period Sri Lanka was ruled by local kings from 483BC to 1815. The most important eras are Anuradhapura Era 483 BC- 1017, Polonnaruwa Era 1017 - 1215 and Kandyan Era 1514 – 1815. [9]

The Colonial period consists of three main eras - Portuguese from 1505, Dutch from 1796 and British in period of 1815 - 1948. The Ceylon name originated from Portuguese name Ceilão. Portuguese were the first island's colonizers. Ceylon was official name till 1972. [9]

Portuguese colonial mission arrived on the island in 1505. Sri Lanka that time consisted of three kingdoms - Kandy in the central, Kotte at the Western coast, and Jaffna in the north. The Dutch arrived in the 17th century and most of the island came under their dominance, but Kandy central region remained independent. The British East India Company took control of Ceylon in 1796. It was declared The Crown Colony in 1802 and when the Kingdom of Kandy fell in 1815, the whole Ceylon went under British rule.

Modern country's history starts on 4 February 1948 when the country became independent and gained the name of *The Commonwealth of Ceylon*. Sirimavo Bandaranaike was the world's first female prime minister in 1960. A constitution was introduced in 1978 which made the Executive President the head of state. In 1972 the name was changed to *Free, Sovereign and Independent Republic of Sri Lanka*. In 1978 it was changed again, and this time to *Democratic Socialist Republic of Sri Lanka*.

3.1.2. Civil War

The Sri Lankan Civil War started 23 July 1983. Independent militant organization the Liberation Tigers of Tamil Eelam (the LTTE, also known as the Tamil Tigers) were fighting to create an independent Tamil state called Tamil Eelam in the north and the east of the country. LTTE was found in 1976 as tensions increase in Tamil-dominated

areas of north and east. After a 26-year military campaign, the Sri Lankan military defeated the Tamil Tigers in May 2009, bringing the civil war to an end. [27] [34]

The war caused significant hardships for the population, environment and the economy of the country, with an estimated more than 70,000 people killed. [27]

The Tamil Tigers fighting tactics resulted in their listing as a terrorist organization in 32 countries, including the United States, India, Canada and the member nations of the European Union. The Sri Lankan government forces have also been accused of human rights abuses. [34]

There was historically tension amongst Sri Lanka's two largest ethnic groups, the Sinhalese and the Tamils. Tamils started to come during 3rd century BC from India to the North part of Sri Lanka and Sinhalese kingdoms constantly fought with Tamil ones during pre-colonial era. British used Indian Tamils as a cheap labor bringing them from India.

In 1948 immediately after Independence controversial law was passed called the Ceylon Citizenship Act. This law made virtually impossible for Indian Tamils to obtain citizenship in the country. Approximately over 700,000 Tamils were made stateless. Over the next three decades more than 300,000 Indian Tamils were deported back to India. In 1956 "Sinhala Only Act" was passed. This act replaced English with Sinhala as the only official language of the country. Many Sri Lankan Tamils working in the Ceylon Civil Service and other public services were to resign because they didn't speak fluent in Sinhala. The civil war was a direct result of the escalation of the confrontational politics. [4]

3.2. Description of the Sri Lankan economic situation

After the end of 26-year conflict with the LTTE, Sri Lanka continues to experience strong economic growth. However, the global economic downturn in 2008 had a negative impact and the challenging external economic climate dragged Sri Lanka's economy too, but the country remained an impressive performer amidst the highly subdued growth seen both in the developed and developing world.

3.2.1. Global Context

The Euro area in 2012 was showing austerity pressures and sovereign debt problems together with political inertia resulted in a negative GDP growth of 0.4 per cent. Unemployment across the region remained high, region's economies continue to contract and bank lending remains very weak. [10]

Meanwhile the United States economy grew by 2.3 per cent, but political gridlock remains a challenge to stimulating any further growth. Unemployment dropped down to 7.6 per cent but there were speculations that the Federal Reserve was about to roll back the third wave of quantitative easing, showing the Fed's confidence in US economic recovery. [10]

Emerging economies as well registered a moderation of growth in 2012, the dependence of emerging economies on weak markets in the West depressed economic growth in these countries too. Domestic policy issues also played a role, for example India's back and forth on a new Foreign Direct Investment (FDI) regime. China grew at 7.8 per cent in 2012 while India grew only at very weak 4.5 per cent. Meanwhile, the Middle East recovered and grew at 5.2 per cent in 2012. China is showing decisive strategies, it's 12th Five Year Plan indicates pro-market policies focused more on services sector development, as well as shift from the low-cost model to greater technological intensity and innovation. On the other hand India shows itself in a policy paralysis with the current government unable to force structural reforms that would put the country on a sustained growth footing. The Indian economy shows growth that is slowing down and fiscal and current account deficits run high inflation. [10]

3.2.2. Overview of Sri Lanka's economic situation after 2009

The Government has been pursuing large-scale reconstruction and developing projects in order to bring growth in war disadvantaged areas. They have been pursuing development of small and medium enterprises and increase of agricultural productivity. [26]

However the Government has to pay its high debt which together with bloated civil service contributed to huge budget deficits. Fiscal consolidation efforts and strong GDP growth in recent years have helped bring this fiscal deficit down. The financial crisis of 2008-2009 exposed vulnerabilities of Sri Lanka's mainly export-oriented economy and almost caused a balance of payments crisis. Agriculture slowed down due to draughts and weak demand affected exports and trade. Sri Lanka had floated the rupee in early 2012 which resulted in depreciation and took steps to curb imports. A large trade deficit remains a problem and the government debt being 80% of GDP remains one of the highest in the emerging markets. [26]

After exposing its weaknesses, one of the factors that helped regain the trust of investors in Sri Lanka's economy was \$2,6 billion loan from the IMF (next to the end of the civil war). Together with the government's policies on rupee depreciation, raised interest rates and boosted energy prices to narrow its budget deficit and protect foreign-exchange reserves. President Rajapaksa was raising cash to build roads, ports and power plants to help boost growth.¹

"The government's policy package to contain the trade deficit is working, which together with continued strong remittances and tourist related inflows is helping to turn around the balance of payments position," Prakriti Sofat, a regional economist at Barclays Plc in Singapore, said before an IMF announcement of disbursing \$415 million in mid 2012 as the final tranche of the \$2,6 billion loan. "Although external vulnerability remains high, we believe continued IMF involvement will support investor confidence."²

Sri Lanka's economy recorded an impressive growth in the two years following the end of the conflict in the rates over 8%, but in 2012 the growth moderated to 6,4%. The reason was economic overheating mainly by a rapidly expanding trade deficit and government had to come with adjustment measures in early 2012 which resulted in higher interest rates (with a credit ceiling on bank lending), allowing flexibility on the

¹ Sri Lanka to Receive \$415 Million IMF Loan. BLOOMBERG. [online]. 2012 [cit. 2014-04-24]. Dostupné z: <http://www.bloomberg.com/news/2012-07-20/sri-lanka-to-receive-415-million-imf-loan.html>

² Sri Lanka to Receive \$415 Million IMF Loan. BLOOMBERG. [online]. 2012 [cit. 2014-04-24]. Dostupné z: <http://www.bloomberg.com/news/2012-07-20/sri-lanka-to-receive-415-million-imf-loan.html>

exchange rate, tax hikes on major items (cars), and higher energy prices. Coupled with adverse weather, the growth had to moderate. [10]

2012 was a year of a sharp decline in both exports and imports. Main reason why exports decreased was the weak economical situation of Sri Lanka's export destination markets and the lower prices of key commodities like cotton and rubber which depressed export prices. The imports had weakened due to rupee depreciation, tighter credit conditions and duty hikes which curbed import demand. Also lower world commodity prices affected Sri Lanka's imports. Tighter credit conditions were one of the reasons of growth slowdown in the country because credit to the private sector declined throughout 2012 in response to the credit ceiling imposed by the Central Bank of Sri Lanka and higher interest rates. [10]

In January 2013 the ceiling was lifted up by the Central Bank of Sri Lanka, but credit demand by the private sector still remained highly subdued. Lending to the private sector in January 2013 of Rs. 9.7 billion was less than a quarter of lending in January 2012 (Rs. 44.5 billion). [10]

The Government accepted Rs. 406 billion in bond and bill auctions in the first quarter of 2013, compared to Rs. 146 billion in the same quarter of 2012. This reduced supply of funds to lend to the private sector and keeps interest rates up. Later on, bill and bond auctions have been smaller in magnitude. By 2013 the Central Bank encouraged foreign borrowings for investment and business purposes. Some local banks took advantage of this and raised a total amount of US\$ 973 million in long term dollar loans. Higher domestic borrowing may increase the interest rates and bring inflationary pressures and the Central Bank appears to consider that there is room for further relaxation of monetary policy on account of moderate inflationary pressures, owing to subdued economic activity and a fairly stable rupee. Attempts to use monetary policy to revive economic growth will come up against fiscal constraints. [10]

Sri Lanka's debt-to-GDP ration has reduced from the heights of over 100% of the early 2000s to around 80% in last three years. It is mainly due to the strong GDP growth in the immediate post-conflict period and an unrealistically stable nominal exchange

rate. Although it remains below any alarming level, it is still relatively higher than other emerging market economies. China is at around 20%, India at around 70%, Turkey at around 40% and Brazil at around 64%. [10]

Sri Lanka's external debt profile is alarming. While the external debt-to-GDP ratio has remained unchanged for over the last few years, the composition of this debt matters. As noted in 'Sri Lanka: State of the Economy 2012' report, „the share of non-concessional loans and commercial borrowing in Sri Lanka's outstanding foreign debt has increased sharply“. It rose from 7,3% in 2006 to 50,5% in 2012. IMF says that there will be no more financial support to Sri Lanka. Although there is no need of balance of payment support, it would help to provide comfort and confidence to the markets. [10]

Sri Lanka moved to a middle income economy and the support from the IMF and the World Bank are usually provided to countries during times of distress, when it is unable to tap international capital markets. In fact Sri Lanka was very successful in tapping international dollar-denominated bonds. Dollar-denominated bonds issued between 2009 and 2012 were at around half of the rate of domestic loans. Sri Lanka maintained its sovereign credit ratings (BB-stable by Fitch, B1 positive by Moody's, B+ stable by Standard and Poors) in the times when other countries registered a decline in their rating (South Africa, Cyprus, Spain, Portugal and France). In July Moody's downgraded its rating from B1 positive to B1 stable citing the lead reason as „a decline in the strength of the external payments position in the past two years“. [10]

When a country has higher external liabilities and a higher foreign debt service outflows, foreign exchange inflows need to rise to support it. Export earnings play a critical role and this focus has been lacking recently because Sri Lanka's export performance is disconcerting. [10]

A very important part of sustaining growth through a transition to middle-income economy status and beyond is being more open to the global trading system, Sri Lanka was a leader in the region when it liberalized its foreign trade system in 1977 with crop processing like tea, rubber and coconut, as well as high quality ready-made clothes. This led to the trade-to-GDP ratio of 80% by 2000, but the ratio had almost halved in

2010 to only 44%. Exports-to-GDP ratio fell from 33% in 2000 to 16,4% in 2012. Sri Lanka is trading less and less with the world and that has been accompanied by a fall of Sri Lanka's share of exports in total world share. This decline in trade openness came at a time when the world is integrating more and more, global trade is accelerating, and most countries are making an aggressive push towards bilateral and regional preferential trading arrangements. [10]

In 2012 Sri Lanka's exports contracted by 7,4% and in the first half of 2013 it already contracted 4,5%, across all segments except mining. During the same period, Sri Lanka's competitors like Bangladesh and Vietnam increased their exports, 16,2% and 19,7% respectively. This shows that only a part of Sri Lanka's declined exports can be attributed to the weak global economic climate and depressed demand in Sri Lanka's key markets while the other part of the reason is more frightening. Sri Lanka has not successfully expanded its export markets through both bilateral and regional trading agreements, as well as through enhanced competitiveness. [10]

This shows a changing structure of the economy because of focus away from the export-led growth. The growth in recent post-conflict years was sourced mainly directly from domestic non-tradable sectors like constructions (infrastructure development) and retail, tourism sector and indirectly through foreign worker remittances. It is expected that after a conflict the economies will see a natural boost in non-tradables like construction and retail, but literature suggests that countries which successfully navigated the middle-income economy transition registered their tradable sector grow much faster than the non-tradable. [10]

Taken from a lesson given by experience of countries that achieved 8% plus growth and sustained it over a long period, the key ingredient was tempering macroeconomic volatility and uncertainty during their most successful periods, which have helped raise private sector investment rates. Sri Lanka ranks high on the business climate assessments, but macroeconomic uncertainty was always an issue for private sector. [10]

Sri Lanka has of course made huge improvements which can be seen on inflation rates which remain in single digits for last four years. Commitments for narrowing the budget deficit seem to be strong. The fiscal deficit has been reduced from 9,9% of GDP in 2010 to 6,9% of GDP in 2011 and further to 6,4% of GDP in 2012. Concerns on the fiscal activities remain on the expenditure and revenue side. [10]

The biggest drain on the expenditure side are loss-making state-owned enterprises (SOEs). SOEs are the main problem in the energy sector. The financial situation of Ceylon Electricity Board (CEB) has shown terrifying change from Rs. 15 billion in 2006 to Rs. 60 billion in 2012. Unpaid dues by the CEB to Ceylon Petroleum Corporation (SOE as well) worsen the situation being entangled in a vicious cycle of loss-making. In 2012 tough but necessary adjustments were seen as welcomed and long time missing reform as reform imperatives were overtaken by political ones. In May 2013 the tariffs were reversed which was seen as a significant blow in the policy reform process. [10]

Next to basic inefficiencies in the CEB, high tariffs in the country are attributed also to the fact that governments have failed to implement long term generation expansion plans as scheduled. Much delayed coal plants are now coming to be built. This brings another risk, because while thermal-fired plants would mean to avoid global oil prices movements, coal prices have shown great instability in the past. Yet coal is acknowledged as the future power generation source in Sri Lanka's way to its growth ambitions. [10]

On the revenue side, taxation is still a problem. Some significant tax reforms were undertaken through the 2011 budget including slashing of corporate and income tax rates with a view to encouraging economic activity and removing the PAYE (Pay as you earn) tax exemption enjoyed by public servants since the late 1970s, rationalizing some border taxes and streamlining the tax incentives regime. However these changes still haven't delivered higher revenue, in fact the tax-to-GDP ratio declined to its lowest level in 20 years at 11,5%. Middle income countries show the average ratio around 18%. The problem is that essential administrative reforms didn't accompany the reduction of rates

and it turned in widening of the tax base to offset the revenue loss. Value added tax exemptions and zero ratings have increased to accommodate political lobbies. [10]

Many international organizations comment the concerns over fiscal weaknesses. Reports by Standard and Poor's, Moody's, etc., all point to risks rising from this. [10]

The strategy of lowering the fiscal deficit was to shift payments to suppliers and delaying or scaling back on capital expenditure projects. Also the losses of SOEs are not reflected in this and are passed on to the balance sheets of state banks that keep financing the losses. These are not sustainable strategies, while fiscal consolidation is an important objective, it can't come at the expense of enhanced public investments in areas that contribute to sustained growth, like social and physical infrastructure. The role that infrastructure investment can play in recovery from economic crises and to promote growth has been shown in many economies, promoted mostly by current US president Barrack Obama. During East Asian financial crisis it was China who was focused on its fiscal stimulus investment on highways, railroads, port facilities, and electricity – areas that were a bottleneck of China's growth. Infrastructure investments represent two thirds of the growth increase in East Asia and half of the growth increase in Africa. Sri Lanka has realized this potential and shows impressive results during the past 5-7 years. Most of the ongoing projects are foreign-funded, either on commercial or bilateral loans. [10]

In the future there must be private sector participation in infrastructure projects, to ease the financing burden of the government. The government estimates around US\$ 10 billion of projects in port-related infrastructure will open up for private investments in upcoming 5 years. Mobilizing private capital for public projects is not easy since the investors are wary of tenuous processes and show concerns over corruption. Sri Lanka rethorically welcomes all private investment into infrastructure sector but murky procedures and political interference seem to have kept private investors away from any notable participation. [10]

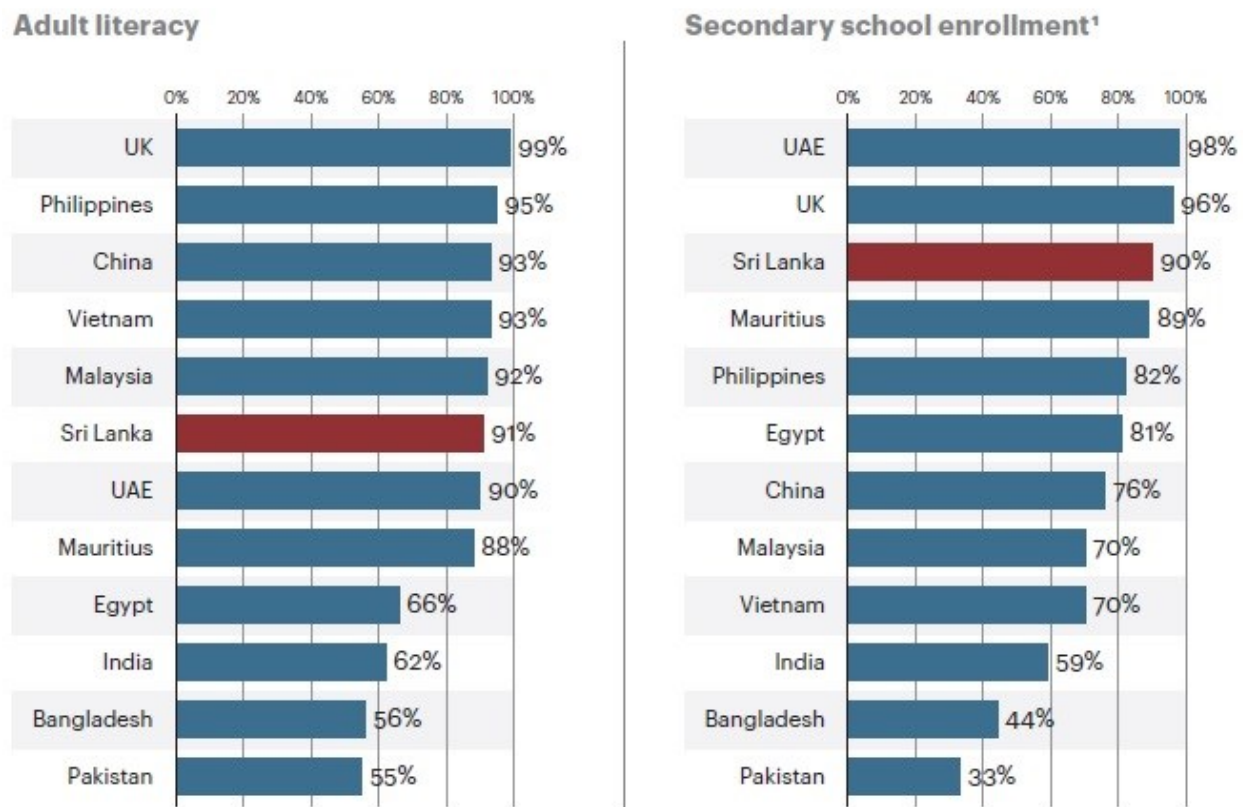
3.2.4. Description of human development factors of Sri Lanka

Education

Physical infrastructure is only a part of the things that Sri Lanka needs to do to make a move towards a middle-income economy and sustain growth over a longer period. Social infrastructure will be the one to determine the quality of the country's workforce that truly derives growth. Connective infrastructure was getting a lot of attention but sectors like health and education are showing significant gaps resulting from underinvestment in recent years. Sri Lanka is now benefiting from the investment in education and health from the post-independence period, but the transition to the middle-income economy brings new challenges to human development. Public expenditure on education has fallen from 2,3% of GDP in 2000-2010 to 1,8% of GDP in 2012 being at its 10-year lowest. In average upper middle-income economy spends 5% of GDP, and lower middle-income economy spends 4%. Over 100.000 A/L graduates each year are not able to pursue higher education since state universities are not able to accomodate them. The alternative of private higher education is affordable to only few affluent households. In 2012, 40.000 more students were left out than in 2011. Sri Lanka also show a decreasing demographic effect in labour force participation rates. 7% fewer young people were in the labour force in 2010 compared to 2006. This means that Sri Lanka is to reach upper middle-income economy status with fewer people working to get there. This necessarily means more investment in education and skills development, so the smaller amount of young people in the workforce can generate more output per person. [10]

Since colonial times, Sri Lanka always excelled in education quality compared to other developing countries. Primary and secondary education is free since 1938, and along with an extensive university system, Sri Lanka's education systems are top level. The literacy rate has exceeded 85% for more than 30 years and currently is at 91%. Literacy rates in most of the countries in South Asia have been lower than 60% until quite recently. Sri Lanka has the highest secondary school enrollment rate among developing countries in the benchmark group, and it ranks number one in South Asia on the United Nations Human Development Index. [17]

Figure 3.1: Literacy and enrollment rates



¹ Secondary school enrollment refers to gross enrollment rates measuring total enrollment in a specific level of education as a percentage of the total population corresponding to the relevant age group. These percentages represent a country's capacity to accommodate its school-age population for given levels of education.

Sources: United Nations Educational, Scientific, and Cultural Organization 2011; A.T. Kearney analysis

Source: A PETERSON, E., BELL, S., GOTT, J. *Competitive Benchmarking: Sri Lanka Knowledge Services*. A.T.Kearney, 2012.

Health

There are many challenges in the health sector as well, with the biggest one coming from the changes in the demographic and socio-economic character of the country, associated with the transition to the middle-income economy.

There are low investments in the health sector, total expenditure of the GDP has remained below 5% of the GDP between 1995 and 2008, while middle-income country average is around 8%. Lower public investment has been accompanied by a rise in private expenditure on health. The proportion of out-of-pocket expenditure, when the

cost is borne by the patient, out of private health expenditure has grown over time. Sri Lankans spend Rs. 20 billion more out-of-pocket on health care than they did 20 years ago. This is, however, driven by those with higher spending power, and has important equity implications. Here breeds inequality and social exclusion in benefiting of quality health care services. [10]

Labour market

Pressures on Sri Lankan enterprises are rising because of the rise of factor prices and threats to external competitiveness. These companies will have to look to become more efficient and adopt greater product and process innovations. We will see changes towards greater adoption of technology combined with higher skilled labour. Sri Lanka has always had a workforce that was generally well trainable owing to high literacy and health outcomes. With the evolving patterns of growth, the future demand will be for knowledge workers possessing higher-order skills that go beyond basic education and literacy. Latest trends indicate that manufacturing enterprises are facing difficulties finding workers for the „factory floor“. There is a shift away from blue-collar work and the pressure on the educational system to deliver the required training and skills is immense. Youth labour force participation in estate sector (tea, rubber, coconut) has fallen almost 12% between 2006 and 2010. Urban employment, on the other side, has shown an increase from 12% to 14% between 2006 and 2010 and it is the only sector to see a rise in youth unemployment during this period. [10]

The technology change focused mainly on skills will be very important feature in Sri Lanka's transition to the middle-income economy and it can have an impact on overall wage dispersion. Rising income inequality can reduce social mobility and future prosperity. More than a half of the income is received by the richest 20% of households and the lowest 20% receive only 4,5% of the income. On one side is equipping workers with skills to follow on to the economic changes and minimize the gaps between them, on the other side is to create a safety net for the poorest and those more likely to be left out. An important part of moving towards a middle-income country is to ensure adequate protection for the most disadvantaged population groups and those that are most vulnerable to shocks. [10]

Meeting these emerging human development needs will require greater state capacity, which comes largely in terms of tax revenue. Higher domestic revenue will come with economic growth and an important driver of this growth is high rates of savings and investment. Countries that achieved of 8% plus growth showed the importance of these rates. Analysis for Sri Lanka shows that a rising global middle income class in a country is likely to encourage more savings and investment. [10]

Development achieved since the end of the conflict

All this struggle that Sri Lanka has to go through in its way to sustain the boost seen in the years immediately after the conflict there is no doubt of the impressive gains in prosperity made in recent years. The unemployment has fallen from 5,8% in 2009 to 4% in 2012 and poverty nearly halved between 2006/07 and 2009/10. The „lagging“ regions are catching up with Western Province (Colombo) GDP dominance falling from 50,8% in 2005 to 44,4% in 2011 and lagging provinces are showing steady increases in their contribution to the national output. Private consumption expenditure (PCE) has risen steadily in recent years, growing by 70% between 2008 and 2012 and falling poverty brings the potential for a rising middle class. [10]

Sales of motor cars, motorcycles and consumer durables which have been seen as luxury items in a low-income economy have risen in line with rising mobility. The demand rose up dramatically after substantial duty cuts in mid-2010. Even before that the rise was significant – annual registration of new cars went up over 40% in 2008 in comparison with 2002, and 65% in case of motorcycles. [10]

Such rises in domestic consumption will boost non export oriented enterprises, but alone they cannot drive sustained growth. It is export-oriented enterprises that will determine rapid growth.

Reducing poverty

Sri Lanka has made a huge move in reducing poverty, however, there is still a significant amount of households clustered just above the poverty line and various shocks (both at household or macroeconomic level) could push them back to poverty.

Essential is a strong social protection system to address the emerging vulnerabilities. One problem is Sri Lanka's ageing population and the second one is high number of informal workers in the labour force. A high proportion of those employed in the construction, mining, and quarrying industry (83%), hotel and restaurant industry (50%), and manufacturing industry (45%) are informal workers. [10]

There are a multitude of social protection programmes currently operational, most of them deliver insufficient benefits, are poorly targeted, and do not cover the risks and vulnerabilities adequately. It is most evident in the country's largest programme called Samurdhi. The maximum income which was delivered by Samurdhi to a household is Rs. 1,500 while the national poverty line dictates at least Rs. 3,300 per month to meet consumption needs. Better targeting in social protection programmes like Samurdhi can free up more funds to give to those that most need it. It is estimated that only around 15% of Samurdhi recipient households are actually poor and as much as 49% of households identified as poor do not receive any Samurdhi benefits. At this time when the fiscal pressures are rising the government will have to move from blanket approach to social welfare towards a more targeted and effective social protection architecture. [10]

3.2.5. Economic situation of the northern part of Sri Lanka

The northern part of Sri Lanka being understood as three provinces, where Tamil population is the dominant one. It is the Northern Province (NP) with its capital Jaffna, the North Central Province (NCP) with Anuradhapura as its capital, and the Eastern Province (EP) with Batticaloa as its capital.

Nearly 30 years civil war between the armed forces of the Government of Sri Lanka (GoSL) and the LTTE (Liberation Tigers of Tamil Eelam) has ended in 2009 with a strong victory of the GoSL armed forces. The war caused displacements of more than 300,000 people from their homes in the northern part of Sri Lanka. There are various state policies in practice for resettlement of the North. As of 2nd January 2012, nearly three years after the end of the conflict, Ministry of resettlement have claimed in its statistics, that 236,429 people returned to their homes. [270]

The infrastructure and cities were destroyed during the war. The railway system in the Northern Province was national pride, but it has been completely destroyed. The LTTE soldiers decomposed the railways and use the material for their own purposes, in Jaffna, in one of their bases, they destroyed the railway station, city hall, the ancient Jaffna Dutch Fort, and many other.

The population

The Northern Province has a population of 1,063,000 inhabitants where more than half of them live in the Jaffna district (585,000), 172,000 live in the Vavuniya district and then it is equally redistributed in other three districts. North Central province has a population of 1,263,000 inhabitants where two thirds of them live in the Anuradhapura district, and one third in Pollonaruwa district. The most populated province is the Eastern Province with 1,558,000 inhabitants. In total these three provinces count for 3,884,000 inhabitants which is 19,1% of the total population of Sri Lanka, while the total area of these three provinces represents 43,8% of the total area of Sri Lanka. [2]

What is not visible in the mentioned statistics is the fact, that a high number of Tamils were economically forced to move to Colombo and other areas for work or studies. There is a high number of Tamil students in schools and universities around Colombo, and as well as the workforce is completely mixed. Many of these Tamils would prefer to move back to their homes if it would be economically possible.

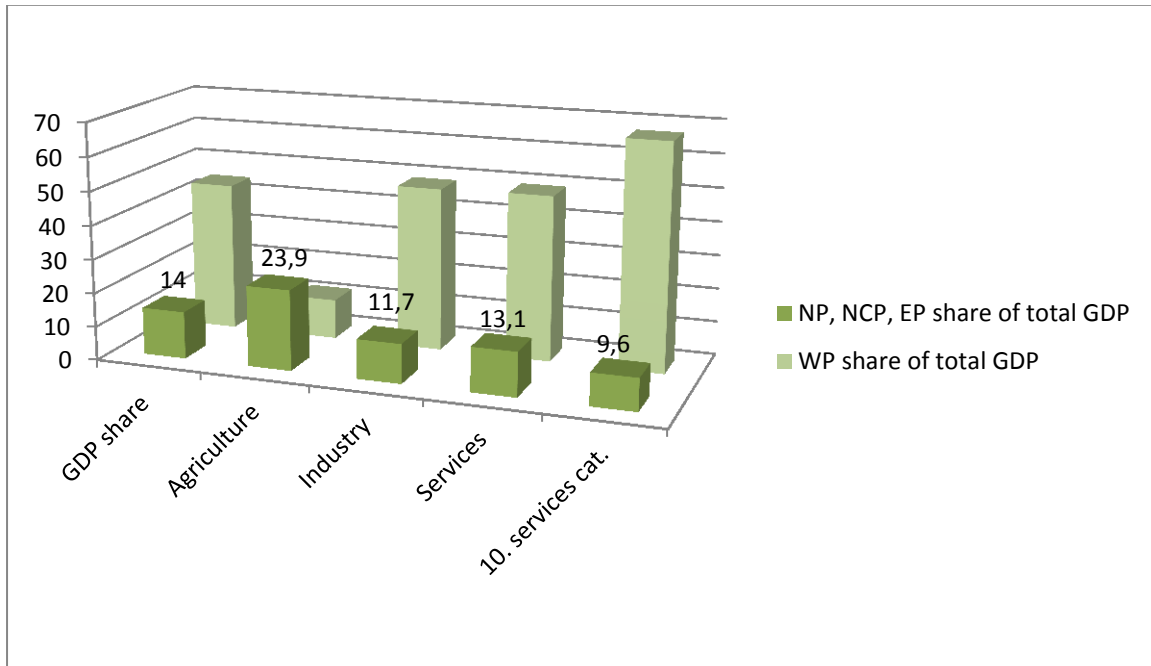
Economic situation

The following figure shows the provincial GDP share of the total GDP of Sri Lanka divided by industrial origin. The light green columns represent the Western Province (Colombo) GDP share of the total GDP of Sri Lanka, to show the inequality of the GDP generation within the country.

The last category, in the figure tagged as *10. Services category* is the category to which the IT/BPO sector belongs. However, this is just to create an idea, because next to the information technology services this category represents within national accounts

also all the services of banking, insurance, real estate, etc. IT/BPO is just a part of this indicator.

Figure 3.2.: Provincial GDP by Industrial origin at Current prices - 2011



Source: Own calculation based on the data from CB annual report 2012.

The GDP share of these three northern provinces (NP, NCP, EP) in the total GDP of Sri Lanka is very little in consideration that it is geographically almost half of the country. The share of these three provinces is 14% of the total GDP.

Much stronger is the agricultural sector, but it is still less than a quarter of total agricultural product of Sri Lanka. However, it is the only sector, where the three provinces produce a bigger provincial GDP than the Western Province.

As it was mentioned in the previous paragraph, there are many Tamils working in Colombo and surrounding areas, which makes the GDP difference between the Western Province and the North much more significant. This does not consider individuals that lost homes during war times and had been resettled recently. This considers economically active labor force or students in Colombo.

The agricultural sector in these three provinces doesn't represent tea and rubber, as it is in the southern part of Sri Lanka, and which are the main export commodities. In the north it is paddy, livestock, and other food crops. In the industry sector it is mining, construction, and factory industry (strong in the Eastern Province). Services sector is mainly composed of import and domestic trade, transport, government services and what is important, by the 10th sector defined as banking, insurance and real estate. This shows that there is a potential for the IT/BPO industry in these provinces.

3.3. IT and BPO Industry

3.3.1. Description of the IT/BPO industry

Sri Lanka's Information Technology Industry had in the past some big obstacles in its way forward. One of them being a long-running war, the other one being the success of India's IT industry. Sri Lanka is still unrecognized by most as a center for delivering IT, business process outsourcing (BPO), and other knowledge services.

IT industry is based on creating and working with technology. Madu Ratnayake (General Manager of Virtusa and Chairman of SLASSCOM³) defined it in an interview for Sri Lankan Prime TV ⁴: „The industry from the IT side, it is technology based in terms of what is called IT products, which is building software products, and the services, which is building software for other companies and enterprises.“

The BPO industry Madu Ratnayake defines in the same interview: „BPO industry is about how do you take core processes, for example HR or legal processes of a company, and do it offshore in another company here in Sri Lanka, India, or any other low-cost geography, who can get it done better, cheaper, faster.“ ⁵

³ SLASSCOM is Sri Lanka Association of Software and Service Companies. It is an independent association and its Board of Directors consists of director of some member companies from the private sector.

⁴ Prime TV - Round Table with Mr. Madu Ratnayake (Part 01 of 06).wmv. YOUTUBE. [online]. 2010. [cit. 2014-04-24]. Dostupné z: <https://www.youtube.com/watch?v=XgpBsufAGU>

⁵ Prime TV - Round Table with Mr. Madu Ratnayake (Part 01 of 06).wmv. YOUTUBE. [online]. 2010. [cit. 2014-04-24]. Dostupné z: <https://www.youtube.com/watch?v=XgpBsufAGU>

In Sri Lanka these two industries, information technology and business process outsourcing, are most of the times considered and clustered as one. The reason is that both of them show very similar patterns and characteristics and most of the times it is even impossible to divide the operations of analyzed companies in one of these two. Many of the companies belong to both and provide services from both of these groups. An example can be Virtusa, when providing a service based on developing a software for a particular client to handle for example a call center. Later on it will be still Virtusa who will be operating this call center for this particular client.

„The IT/BPO is a key industry for Sri Lanka for various reasons,“ continues Madu Ratnayake. „IT/BPO industry globally is very vibrant and is growing very rapidly. The final market for the IT/BPO industry is US\$ 550 billion globally, which is a huge market, and it is also called a supply constrained industry, that means that there is more demand than the supply. It is also predominantly human capital driven industry. Countries like Sri Lanka, where there is a high caliber talent and cheap labour, can benefit a lot from this industry. It gives opportunities for Sri Lanka to create jobs for the youth in terms of high paying jobs, and also every single job that is created in the IT/BPO industry, there is indirect employment of 3 more. Every IT/BPO employee means that there are 3 more employees in the supporting industries. That provides high number of jobs in China, India, Malaysia, Phillipines. These countries have done it very well in this industry. It is also 100% value added industry. That means all the products built in Sri Lanka will be 100% value added in Sri Lanka and can be an item to export without importing any raw material. It is very low capital industry to start in, there is no need of a lot of machinery, and it can be started by first generation of entrepreneurs.“⁶

In addition, it is also green industry, it doesn't create any externalities or pollution. This industry is a great opportunity that can take Sri Lanka from where it is now to a knowledge economy.

Board of Investment of Sri Lanka has the Knowledge services sector as a third most important sector for investment in the country. There are investments into Tourism

⁶ Prime TV - Round Table with Mr. Madu Ratnayake (Part 01 of 06).wmv. YOUTUBE. [online]. 2010. [cit. 2014-04-24]. Dostupné z: <https://www.youtube.com/watch?v=XgpBsufAGU>

and Leisure, and into Infrastructure, considered as more important. Among others are sectors of Utilities, Apparel, Export manufacturing, Export services, Agriculture and Education. This Knowledge services sector encompasses IT software development, Knowledge Process Outsourcing (KPO) / Business Process Outsourcing (BPO), IT and IT enabled services. [22]

IT software development market has more than 100 companies. Sri Lankan companies have been able to develop software products on their own which brought them international recognition. [22]

KPO/BPO industry has short history starting in 2000. Sri Lanka has a growing reputation in niche areas of Financial and other Professional services, Transaction processing and Document management, and call centre services. All this is caused mainly by high literacy rates and growing accounting graduate pool. [22]

IT enabled services are big projects which require extensive use of information technology for delivering the service such as Server farms, Business Services etc. At the moment there are 30 companies operating under the Board of Investments of Sri Lanka. [22]

When A.T. Kearney (2012) interviewed a cross-section of executives responsible for selecting global locations for their IT and BPO centers, most expressed surprise that Sri Lanka would even be an option. However, below the radar most industry observers, a significant knowledge services industry has been developed in Sri Lanka. It goes back to 1980s when the first IT and BPO companies established operations in Sri Lanka and nowadays it is more than 300 of them with 60,000 people holding IT and BPO jobs in this country. The sector generates more than US\$ 400 million in exports. [17]

Several well known international firms such as HSBC, IFS, Motorola, HP, RR Donnelley, WNS have established R&D, IT, and BPO centers in Sri Lanka. In the meanwhile Sri Lanka-based companies provide advanced services to global clients including Google, Lenovo, Microsoft, Nokia, JPMorgan, the London Stock Exchange, Santander Bank, Emirates Airlines, etc. [17]

Sri Lanka is very far beyond the traditional idea of software development centers, large scale call centers, and transaction processing centers. The country has a significant concentration of internationally certified accountants, and Sri Lanka based firms have taken a lead in providing sophisticated accounting services and financial analytics to global clients. Others are already benefiting from Sri Lanka's long tradition of providing offshore legal services, medical diagnostics, and architectural drawings. Sri Lanka is indeed a knowledge hub which is exporting its human capital and skills to the world. The country has already been exporting managers, engineers, doctors and other experts, to run tea plantations, apparel factories, medical clinics and other complex operations for many years. Thanks to IT, nowadays global companies and customers can have an access to these professional skills from anywhere in the world. [17]

Major players in Sri Lanka in the IT/BPO industry

The depth of the IT, BPO and KPO operations, which already exist in Sri Lanka, come often as a surprise to people. The sector already includes everything from multinationals to innovative local startups, providing automated application testing and infrastructure outsourcing, high end Research and Development (R&D), enterprise resource planning (ERP) implementations, the latest cloud and open-source applications, transcription services and call centers, complex financial research, and legal advice. [17]

Multinational BPO and KPO centers

HSBC chose Colombo in 2004 to expand its service centers (after China, India and Malaysia) and built its own building which now employs more than 2,000 full time employees providing a combination of general banking support and advanced services such as analytics, risk, securities, and compliance. [17]

WNS is a global BPO leader operating in Sri Lanka since 2004 and focuses on higher-end finance and accounting services. Clients include a leading UK insurance company, UK government agencies, banking and finance firms. **Mphasis** is a Hewlett-Packard subsidiary with a delivery center in Sri Lanka established in 2010 and they

curently employ 2,000 people. **RR Donnelley** is Sri Lanka's oldest and largest third-party BPO provider offering transaction processing and financial services to US and European clients. [17]

Investment research, financial analytics, and accounting

The first delivery center in Colombo of **Amba Research** was established in 2003. The firm provides equity, fixed income and credit research, quantitative research, corporate finance index support, sales and marketing, and compliance services to many of the world's leading asset managers, investment banks, and hedge funds. [17]

Stax Inc. is a global strategy consulting firm with offices in the US and Sri Lanka. The Colombo branch advises local and regional companies on acquiring private equity funds and expanding into the US, European and Australian markets, and also supports Stax teams with sophisticated data analytics and complex survey administration. [17]

Legal services

LegalBase provides services ranging from document review to sophisticated transactional advisory services to clients in countries as diverse as Norway and the Maldives. Clients are small businesses, law firms, global consumer companies like Dilmah, Red Bull, and the Virgin Group, and boutique private equity hotels. It was ranked by The International Association of Outsourcing Professionals as one of the world's five best legal outsourcing providers. [17]

IT services and solutions

Virtusa Corporation is a NASDAQ (New York Stock Exchange) listed company which has operated in Colombo since it inception in 1995. The company provides IT services to leading Global 1,000 customers in financial services, insurance, telecommunications, healthcare, and capital clients. Among their clients are companies such as New York Life, JPMorgan, Phillips, Siemens, British Telecom, London Stock Exchange. [17]

IFS, a Sweden-based enterprise applications company has more than 1,000 employees in Colombo and Kandy, making Sri Lanka one of the largest IFS's support and development centers. IFS Sri Lanka provides enterprise asset management solutions to public and private clients in the aerospace and defence, oil and gas, food and beverage, and process industries, including DuPont, Pepsi, and the UK Royal Navy. [17]

24/7 Techies focus on infrastructure outsourcing and support for cloud-based applications. **99X Technology** is a leading supplier of product engineering services to independent software vendors, mainly in the Scandinavian market. [17]

MAS is a Sri Lankan company providing design-to-delivery solutions in intimate apparel and sportswear and is leveraging its manufacturing experience to develop IT services. Its subsidiary Attune is the first global SAP solution to focus wholly on the apparel and footwear industry. Attune provides consulting, software license sales and customer support to clients such as Benetton, Burberry, Hanes, and Tommy Hilfiger. [17]

Bileeta has developed very successful ERP system that is easily customizable to accommodate local business requirements. **Creative Solutions** employs more than 350 software engineering professionals and provide software development, support, and quality assurance services to international software companies. More than 100 Creative Solutions resources are dedicated to the development and support of applications using Microsoft SharePoint. [17]

IT research and development

Motorola Solutions operates one of their global R&D centers in Colombo where they focus on the development of embedded software for enterprise devices. **Zone24x7** provides enterprise software, hardware designs and specialist device-management solutions to leading technology vendors, retailers, and banks. [17]

IT products

WSO₂ supplies the 100% open-source enterprise service bus used by eBay. Other clients include BBC, BP, Fidelity Investments, Lockheed Martin, US Army, and Volvo. Colombo-based **Millenium IT** delivers trading, order routing, surveillance and depository solutions to many world leading stock exchanges, broker-dealers, and regulators, and the company is wholly owned subsidiary of The London Stock Exchange Group. [17]

hSenid is a global human resource telecommunication and software solution provider specializing on HR applications, cloud HR solutions, HR outsourcing. hSenid deploys solutions in 24 countries and 18 industries. **John Keells's** IT arm called JKCS has an offshore development center serving to some of the world's leading airlines as Emirates, Kingfisher, Qatar Airways, and SAS for 15 years. Several international airlines, hotel companies, and tour operators use its multi-channel Internet booking engine and hotel management solutions. [17]

Affno is a local company who designed the eGovernment portal for Bahrain, boosting the country to number one in the Middle East and 13 globally in United Nations governance rankings. **Aeturnum Lanka** is one of few partner companies of Microsoft. **Microimage** designs software products in the areas of human capital management, broadcast automation for the media industry, and mobile applications. [17]

Several Sri Lankan companies deliver software and services to global telecom companies including Alcatel Lucent, British Telecom, Ericsson, Mobitel, Safaricom, and Singapore Mobile One. [17]

4. Analysis of the influence of the IT industry towards an economic development of Sri Lanka

Over the last five years, Sri Lanka has made a tremendous progress, the export revenue grew from \$213 million in 2007 to reach \$600 million in 2013, which 182% growth. Total employment grew from 33,000 employees in 2007 to an reach 67,000 employees in 2013, which is 103% growth. The number of companies grew from 170 in 2007 to over 220 in 2013. This is a tremendous growth which was hardly imagined in the beginning and is a result of a concerted effort from industry, academia, government and many other stakeholders. [20]

The brand as IT and BPO destination has improved significantly, the startup ecosystem started to take shape and the number of new companies set up in Sri Lanka grew significantly as well. The recent “Outsourcing Destination of the Year” award in UK was a true validation of the tremendous progress which we were able to achieve. This tremendous growth enables the whole industry to achieve the planned milestone of reaching \$1 billion of revenue by 2016. [20]

AT Kearney ranked Sri Lanka among top 25 destinations in their global ranking in the last three consecutive rankings. Gartner ranked Sri Lanka among its top 30 global locations. IBM, Tholons and several others ranked Sri Lanka at the top of their respective leader boards. [20]

The government recognizes this industry as a key one and supports and enables growth in many ways. Competitive tax incentives, the President’s backing with national initiatives including a Year of English and IT in 2009, Knowledge Hub Initiative, and setting up a Ministry of IT. These are clear indications of the President’s support. ICTA (Information and Communication Technology Agency of Sri Lanka) with its program called ICT Capacity Building Program (ICBP) made a significant impact in multiple areas to bootstrap the growth during the last five years. Export Development Board (EDB) with its focus on taking Sri Lanka to the global market supported many market development activities, and BOI (Board of Investments of Sri Lanka) with encouraging inward

investments. In both, government and private education, IT/BPO was made a priority to achieve the 100% growth in employment. [20]

4.1. The influence based on macroeconomic indicators

Analyzing the influence of any sector of Sri Lanka's economy is a task that is very difficult due to various sources of statistical data where each of them state different values. The value of Gross Domestic Product in market prices are different in the *Economic and Social Statistics of Sri Lanka 2013* published by the Central Bank of Sri Lanka.⁷ Therefore only the values for 2012 and 2013 were used for this analysis in order to avoid any inaccuracies.

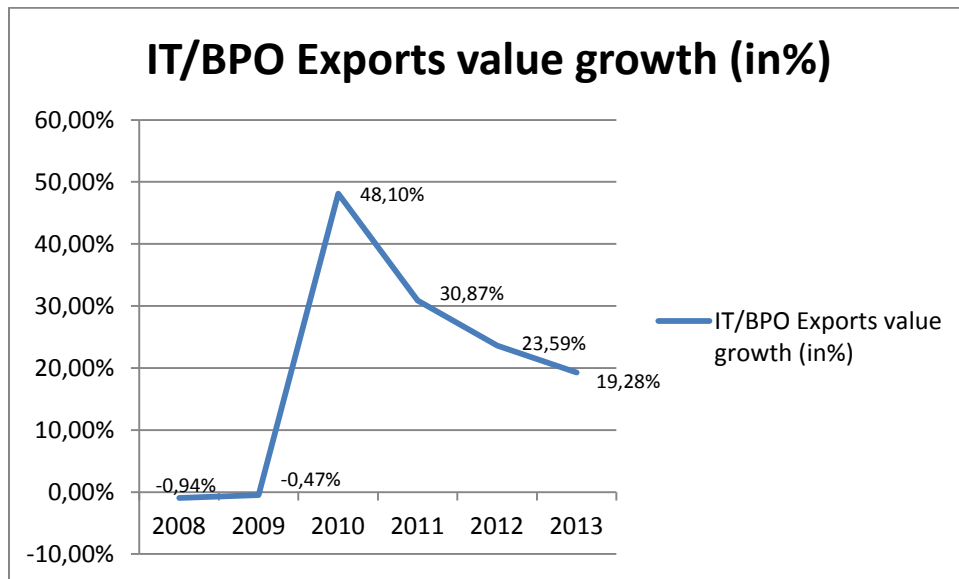
Moreover, there is no available data on measuring the overall output of the IT/BPO sector in Sri Lanka. All indicators measure the value exported by this sector. As it was stated in the SLASSCOM Newsletter, the IT/BPO exports were \$213 million in 2007 and grew to \$600 million in 2013 (Madu Ratnayake, 2013). Export values by this sector for 2009 and 2010 are stated in the *ICT export value survey 2010* done by PricewaterhouseCoopers (PwC) for the Sri Lanka Export Development board in 2011.⁸ These values are of \$210 million of ICT exports in 2009, and \$311 million of ICT exports in 2010. The values of IT/BPO exports in the years of 2008, 2011 and 2012 had been estimated.

The growth of IT/BPO exports between 2007 and 2009 was showing negative values, but in 2010 set up tremendous growth of 48.1% which was followed by 30.87% growth in 2011, 23.59% growth in 2012 on its way to finalize 2013 with 19.28% of growth in IT/BPO exports.

⁷ *Economic and social statistics of Sri Lanka 2013*. Colombo: Central Bank of Sri Lanka, Statistics Dept, 2013. ISBN 978-955-5752-657.

⁸ PRICEWATERHOUSECOOPERS. *ICT Export Value Survey 2010*. Colombo: Sri Lanka Export Development Board, 2011.

Figure 4.1: IT/BPO Exports value growth



Source: Own calculation based on the data from IPS State of economy, CB annual report 2012, ICT Export value survey, CB Economic and social statistics.

The volume of IT/BPO exports expansion, once after the war conflict was ended, is obvious. During the first year after the conflict the economy has experienced a boom and this sector registered almost 50% growth. This growth has been moderating ever since, however its exports value growth is still accounting for almost 20% after 4 years of tremendous growth, and it shows the real potential this sector has.

4.1.1. IT/BPO export value share of GDP

The share of IT/BPO exports in GDP is very little since this sector is very young and growing. In 2012 the IT/BPO exports accounted for 0.85% of GDP, while in 2013 the share was 0.92% of GDP.⁹

The workforce in this sector was 66,000 in 2013, which in a country with population of 20,277,597 means only 0.33%, and the share of employees in the IT/BPO

⁹ *Annual report of the Monetary Board to the Hon. Minister of Finance for the year 2012.* Colombo: Central Bank of Sri Lanka, 2013. ISBN 978-955-5752-602;

SLASSCOM. *Forward Newsletter.* Colombo: SLASSCOM, October/2013, issue 14.

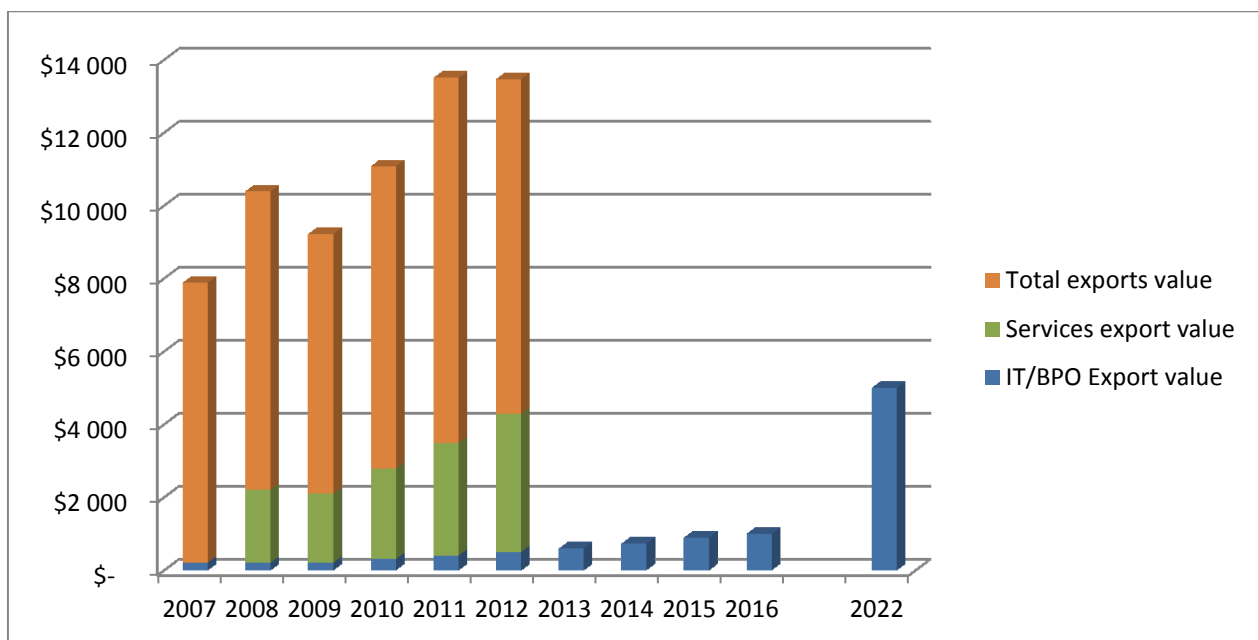
Own estimation of IT/BPO exports in 2012 and own calculations.

sector in comparison with total labor force in Sri Lanka (8,866,399 in 2013)¹⁰ counts for 0.74%.

4.1.2. Comparing IT/BPO export value with Services export value and Total exports value

The values of IT/BPO exports for the years of 2014 onwards are calculated estimations based on long term plans of the IT/BPO sector. These long-term plans are communicated by SLASSCOM and the Board of Investment of Sri Lanka, and are of reaching \$1 billion revenue from IT/BPO exports in 2016 and \$2 billion in 2022.¹¹

Figure 4.2: The share of IT/BPO export value within Services export value and Total exports value



Source: Own calculation based on the data from IPS State of economy, CB annual report 2012, ICT Export value survey, CB Economic and social statistics.

¹⁰ DEPARTMENT OF CENSUS AND STATISTICS. Sri Lanka labor force survey. Colombo: Department of Census and Statistics. 2013

¹¹ SLASSCOM. *Forward Newsletter*. Colombo: SLASSCOM, October/2013, issue 14.
BOARD OF INVESTMENTS OF SRI LANKA. [online]. 2014 [cit. 2014-04-23]. Dostupné z: <http://www.investsrilanka.com/>

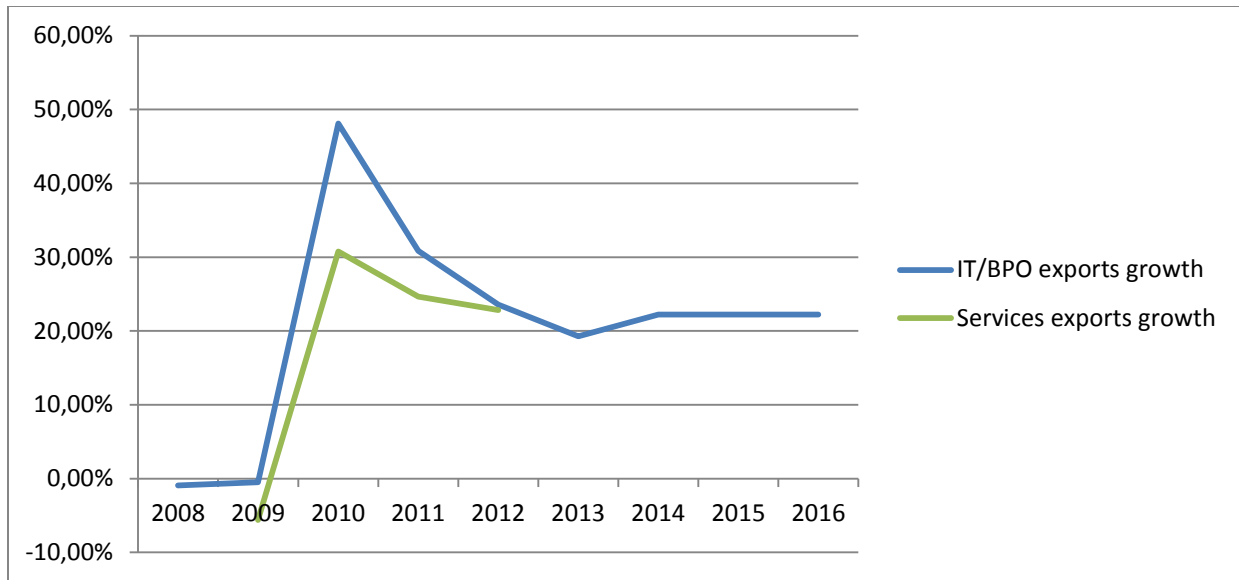
The Figure 4.2. shows the growing importance of the IT/BPO sector within the external sector balance of payments of Sri Lanka. With the future projection of IT/BPO export value is obvious that this sector will be one of the drivers towards balanced external sector and through this mean can set strong foundations for a long-term sustainable economic growth of Sri Lanka.

Unfortunately there are no values available for the services export in 2007 and neither for 2013 yet. The year 2013 lacks value of total exports as well. However it is easy to see that the IT/BPO sector contributes each year more and more towards bigger services exports value and by this towards decreasing the negative balance of payments. The imports amounted \$21,721 million in 2012, which brings negative balance of \$8,159 million (38%).

As seen in the Figure 4.2. it is not only the IT/BPO sector that fuels the growth of overall exported services. The main sector in that services exports are composed of is tourism. In 2010 the income, as said Gross Tourist Receipts, was \$575 million, growing to \$830 million in 2011 to break the billion milestone in 2012 with \$1039 million.¹² The IT/BPO sector together with fast growing tourism will create a very strong base in restructuring the current account balance of payments in order to bring export revenues above import costs.

¹² *Economic and social statistics of Sri Lanka 2013*. Colombo: Central Bank of Sri Lanka, Statistics Dept, 2013. ISBN 978-955-5752-657.

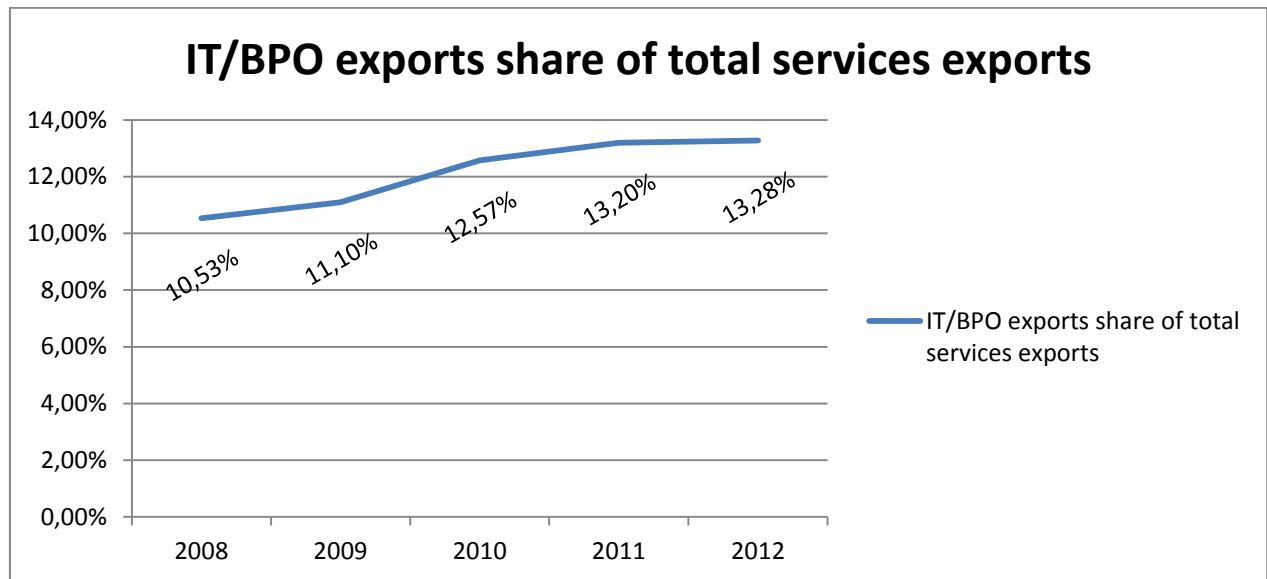
Figure 4.3: IT/BPO export value growth comparison with overall services export value growth



Source: Own calculation based on the data from IPS State of economy, CB annual report 2012, ICT Export value survey, CB Economic and social statistics.

As seen in the Figure 4.3., IT/BPO exports are growing in a faster pace than overall services exports, which means the basket of services is changing towards more significant share of IT/BPO exports. This share changes are visible in the Figure 4.4. More importantly is to see, that these exports are growing, since Sri Lanka's economy needs stronger exports and decrease the imports.

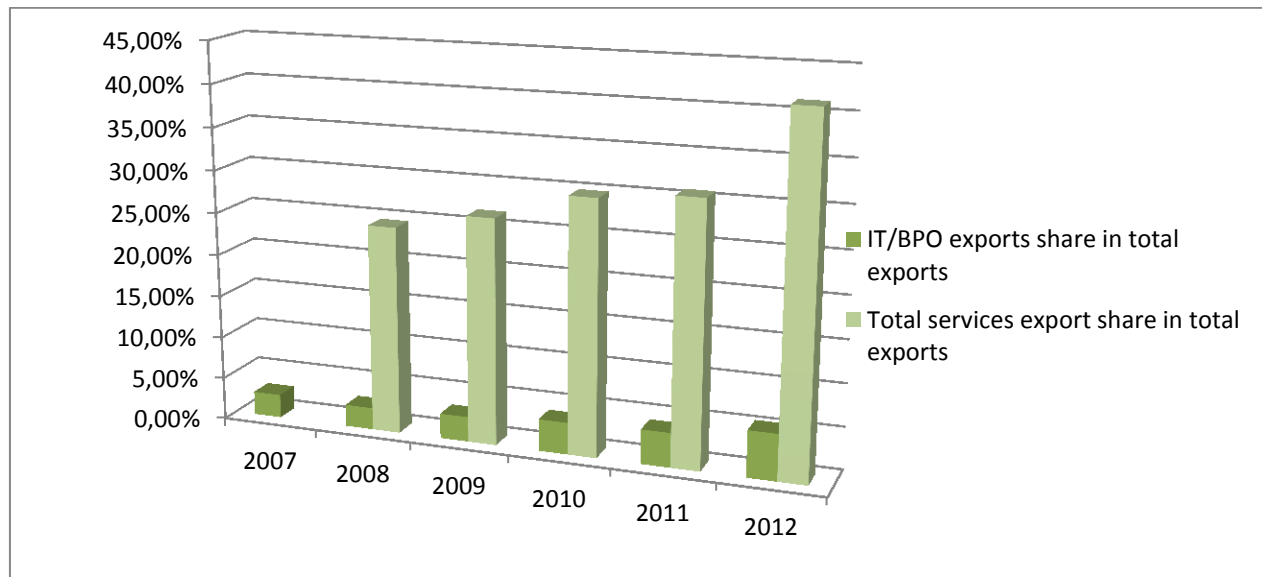
Figure 4.4: IT/BPO exports share of services exports



Source: Own calculation based on the data from IPS State of economy, CB annual report 2012, ICT Export value survey, CB Economic and social statistics.

The following Figure 4.5. shows the increasing share of both IT/BPO exports, and total services in the total exported values. It is visible that both of these ratios are growing due to the increasing importance of both sectors, IT/BPO and total services. As seen again, the IT/BPO sector is not the main composer of exported services, which is the tourism sector, but with its potential of long-term growth becomes one of the most important and trusted drivers of further economic growth through healthy external sector balance of payments.

Figure 4.5: IT/BPO and total services exports share of total exports



Source: Own calculation based on the data from IPS State of economy, CB annual report 2012, ICT Export value survey, CB Economic and social statistics.

4.2. Benchmarking Sri Lanka in IT/BPO global industry

There is set of factors that position Sri Lanka as a country with many competitive advantages which can be source of an economic growth in the future. Sri Lanka offers a very unique mix of extremely low cost (among the lowest anywhere) combined with a highly educated, English speaking population with sophisticated technical skills, and a business environment and infrastructure that is superior to most of the low-cost countries. Furthermore, Sri Lanka is one of the safest, lowest-risk emerging markets. And this comes in regards of both personal safety and business security. There are several generous incentives by the government for investors in the sector, including tax exemptions and import duties, with grants and subsidies for training programs. [17]

Sri Lanka doesn't offer the size advantages of countries like China, India and the Philippines, therefore the focus and strategy has to be very determined. Sri Lanka has shown a focus on higher-value niche products across industries and continues to lead the world in high-value niches such as fast fashion and ethical apparel in the clothing industry, solid tires and surgical gloves in the rubber industry, single origin teas in the

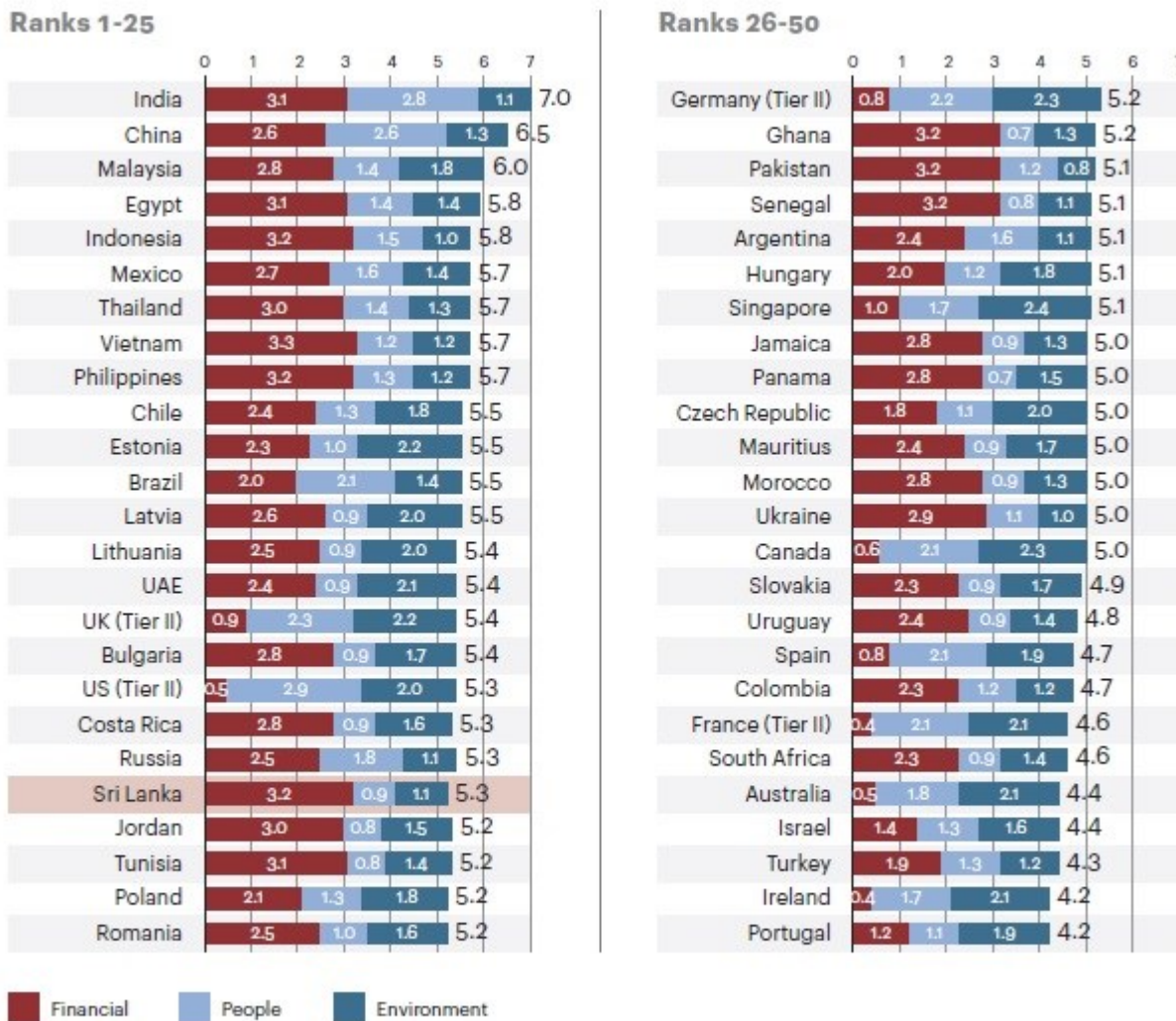
tea sector, and activated carbon in the coconut sector. In a very similar pattern, niche services are a major benefit for companies planning to add complementary locations to their existing global operations footprints. The companies that have centers in Sri Lanka tend to do their more complex and specialized work in Sri Lanka and they perform larger-scale transactional work in India and the Philippines. [17]

Benchmarking competitiveness analysis

The Information and Communication Technology Agency of Sri Lanka (ICTA) asked A.T.Kearney, a leading global management consulting firm, to benchmark Sri Lanka against other leading knowledge services locations. Since 2003, A.T.Kearney's Global Business Policy Council has been publishing the Global Services Location Index, which is recognized as one of the world's leading barometers on the relative attractiveness of different countries for delivery of IT, BPO and other knowledge services. The index evaluates countries based on three categories: financial attractiveness, people skills and availability, and business environment. Over the past nine years the number of countries included in the index increased from 11 to 50. This reflects the increasing range of countries which are evaluated by global corporations as potential locations for delivery of knowledge services. [17]

The following figure shows the ranking of these 50 countries based on their attractiveness evaluated on the above explained three categories. [17]

Figure 4.6: A.T.Kearney 2011 Global Services Location Index



Notes: The Index evaluates countries as offshore destinations based on their financial attractiveness, people skills and availability, and business environment. Tier II means we evaluated cities in areas of the country with a lower relative income level.

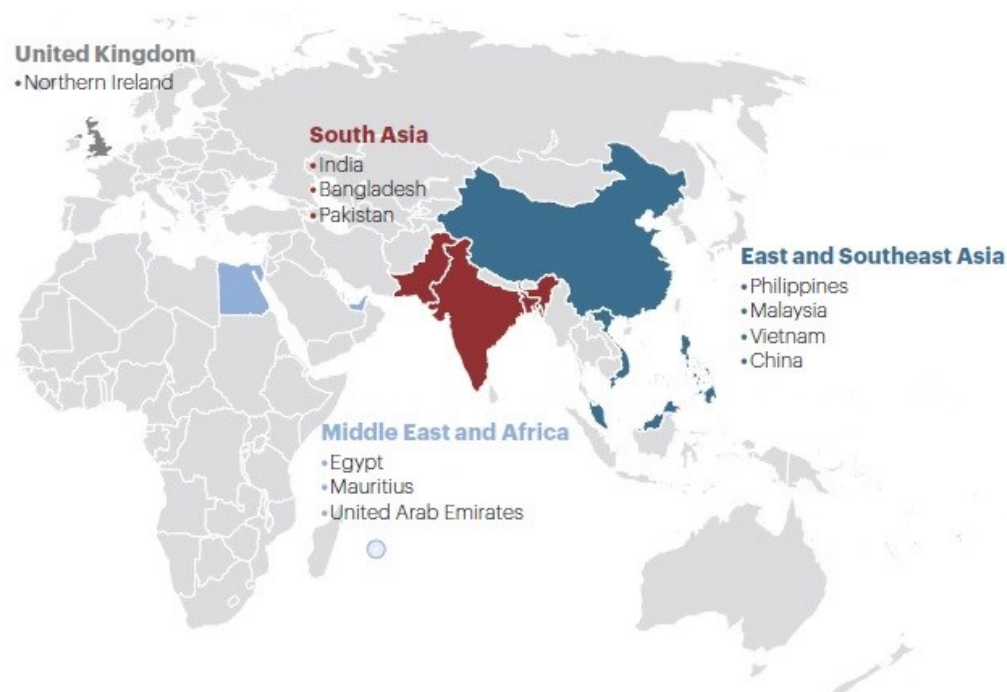
Source: A PETERSON, E., BELL, S., GOTT, J. *Competitive Benchmarking: Sri Lanka Knowledge Services*. A.T.Kearney, 2012.

Sri Lanka is ranked as 21st country in the list lacking behind the first three with a more significant difference, nevertheless all the countries ranked in between 4th and 39th position are pretty much close to each other in regards of overall rankings. The leading big three is consisted of India, China and Malaysia, which brings no surprise at all. There are developed countries in the list as well, these have a huge disadvantage in cost-related issues, but their strengths are in the areas of labor force and business

environment. The last category is the one where most of the developing nations yet need a lot of improvements. [17]

The Index is heavily emphasizing on size of workforce and size of existing IT/BPO industry in each country (as indicators of the relative size of the talent pool), being so high in the ranking is an impressive result for Sri Lanka since smaller countries do not tend to do that well when compared to giants like China, India, Egypt and Mexico. Larger countries naturally dominate the global industry, but there several smaller countries like Costa Rica, Ireland, Israel and Singapore, who have established themselves as significant knowledge service hubs by focusing on quality of their skill base, infrastructure, and business environment. Sri Lanka clearly has the potential of doing the same. [17]

Figure 4.7: Country comparisons: 10 offshore and one onshore competitor



Source: A PETERSON, E., BELL, S., GOTT, J. *Competitive Benchmarking: Sri Lanka Knowledge Services*. A.T.Kearney, 2012.

For the purpose of the study, A.T.Kearney selected 11 countries that companies will most likely consider as alternative complements to Sri Lanka when making their

location decisions. India is preeminent global location for IT, BPO, and knowledge process outsourcing; it is also the standard against which other locations are judged. China has a huge talent pool, Bangladesh has a high number of companies and freelancers in Dhaka, Pakistan has a the same potential as Sri Lanka to become a natural complement to India, Philippines is the top choice along with India for English-based operations, Malaysia emphasizes with the quality of its business environment and infrastructure, Vietnam is emerging low-cost alternative, Mauritius has a good business environment with bilingual English and French speaking population, UAE posses great talent pool and superior business environment and infrastructure, Egypt is leading global services location particularly for companies targeting the European and Middle Eastern markets. UK is in this list because Europe and United States are main customer markets, in this case Belfast in Northern Ireland is selected as one of the leading onshore locations in Europe. [17]

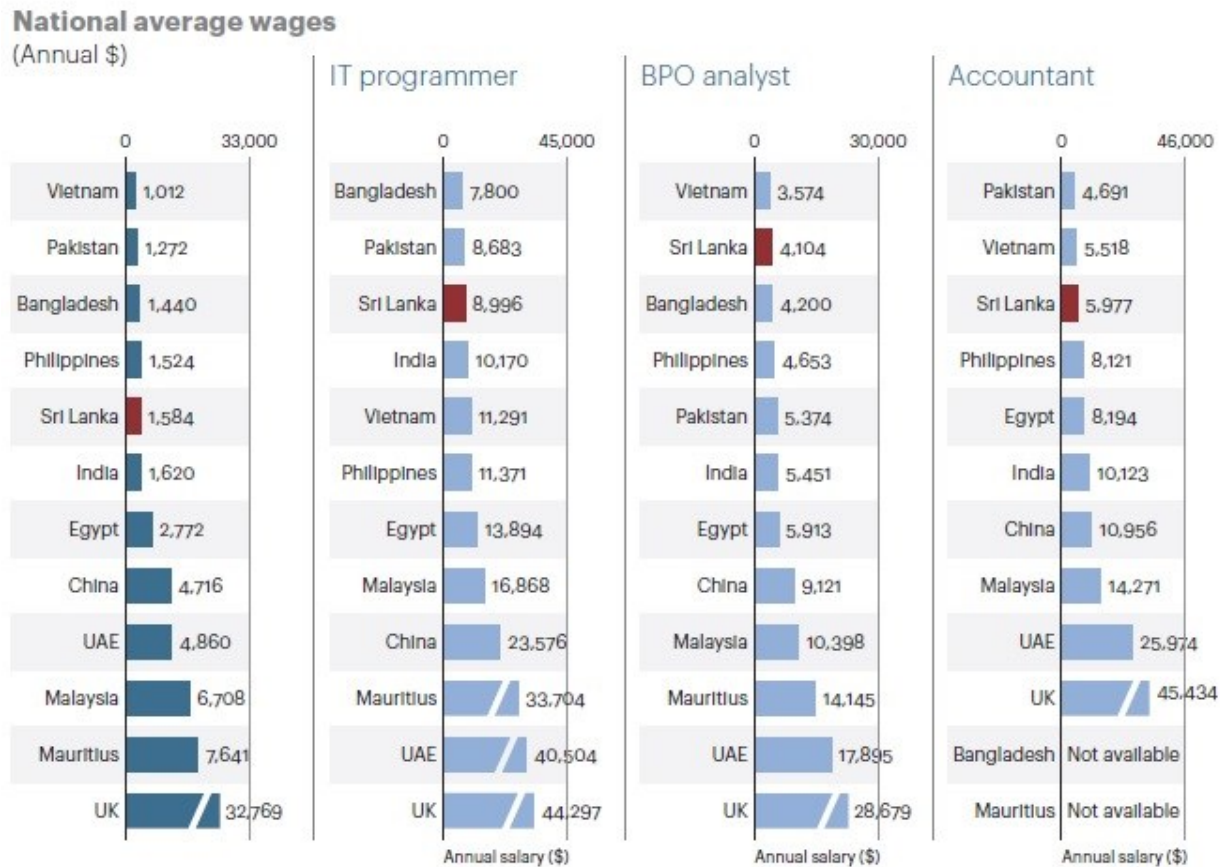
The results of benchmarking Sri Lanka against competitor countries are divided into mentioned three categories: Financial attractiveness, People skills and availability, Business environment.

Financial attractiveness

Although the quality of the skill base and the overall business environment is the key to long-term location decisions, it is still the cost what remains a critical factor in the selection process. Sri Lanka next to well-educated labor and solid infrastructure scores extremely well in the financial attractiveness category. [17]

Sri Lanka's average wages are around \$1,500 per year, which is the same range as Bangladesh, India, and the Philippines (see figure 3.3). Only Vietnam and Pakistan show significantly lower wages. [17]

Figure 4.8: Compensation costs



* Compensation includes base salary plus benefits, tax, and bonus; estimates are used when data is not available; salaries do not reflect fully loaded seat costs; accountant salaries not available for Bangladesh and Mauritius.

Note: BPO is business process outsourcing.

Sources: Economist Intelligence Unit 2011, Mercer HR Consulting 2011, Watson Towers 2011; A.T. Kearney analysis

Source: A PETERSON, E., BELL, S., GOTT, J. *Competitive Benchmarking: Sri Lanka Knowledge Services*. A.T.Kearney, 2012.

According to surveys conducted by many independent and third party consultants, fully loaded compensation costs in Sri Lanka (including benefits, bonuses and taxes) are at least 10% lower than India for an IT programmer with two or three years of experience, 20% lower for a BPO analyst, and 40% lower for an experienced accountant. [17]

The fact that needs to be pointed out here is the average annual salary for an accountant, which is very comparable to the one in Vietnam, while Pakistan being the only cheaper destination than these two. Together with a second fact that Sri Lanka

possess with the highest number of certified accountants outside UK (A.T.Kearney, 2012) gives Sri Lanka an incredible strength in this particular niche. [17]

The reason that explains this difference is that Sri Lanka has not experienced the same demand growth as India, the Philippines and other countries, and this results in lower wages as well as in less attrition. In interviews, executives are reporting consistently that their attrition rates in Sri Lanka are less than 20%, in India and the Philippines the rates in the IT sector are 20% to 25% and in 30% to 35% in the BPO sector. [17]

Real estate prices in the Colombo city center are lower than in all the other analyzed countries except Mauritius, which is on a similar level. An average rent for a top-end office space in Colombo is 30% less than in Kuala Lumpur or Cairo and at least 50% cheaper than in Guangzhou or Bangalore. [17]

Electricity cost in Sri Lanka is the highest among these 12 countries, but it is in the same range as India, UK, Pakistan and Mauritius. Because electricity rates in Sri Lanka are set to recover costs and reinvest in new generation capacity, the availability and reliability of electricity supply tend to be much higher in Sri Lanka than in any other emerging market. As a result, IT and BPO operators have to spend less on emergency backup infrastructure and fuel supply. [17]

The government has been offering very generous tax incentives for IT and BPO companies, reducing tax to 0% for most investors. The corporate tax rate has been reduced to 12% and new companies with investments in excess of \$250,000 are eligible for a four-year tax holiday, while investments of more than \$2 million will enjoy that for additional years. [17]

People Skills and Availability

Sri Lanka has very small population and is considered more as a complement rather than a competitor to countries such as India, its highly skilled workforce is still very big asset. The population of Sri Lanka is 20 million the workforce of 9 million. From the 12 countries included in the benchmark sample, only Mauritius and the UAE have

smaller workforce. However there are very successful countries in the world that have even smaller population and workforce and are proven as knowledge services locations, these are Chile, Costa Rica, Ireland, Israel, Singapore, and most of the countries in Eastern Europe. [17]

The number of Sri Lankans holding IT or BPO jobs has almost doubled from 34,000 in 2006 to 63,000 in 2011. National goal is increasing this number to 100,000 in the coming five years. Speaking of 2012, Sri Lanka had 23 accredited universities and numerous private higher education institutes offering full degree programs, with the total number of enrolled student being 400,000 with almost 100,000 graduating every year. It is more than 5,500 graduates with IT-related degrees joining the workforce each year. In addition to this in 2012 there were more than 25 private educational institutes offering diplomas in IT, and also vocational education institutes around the country that offer preliminary IT training courses. Many private institutes were scheduled to become accredited in 2012 and help to relieve space problems at public universities and open up higher education to much broader section of the population. [17]

There are programs launched by the government with the goal of increasing IT usage and literacy in schools. Within next 3 years every primary and secondary school should have an IT lab and there are as well initiatives to develop IT-enabled content and curricula. The government and private education organizations are also conducting IT skill courses. Overall IT literacy levels have risen from 8% in 2002 to significant 32% in 2011, and the government aims to achieve 75% by 2015 and is training 50,000 teachers to meet this target. Multinational companies including Intel and Microsoft are helping to prepare teachers and supply relevant content, software and Internet connectivity to widen the country's technology footprint and skill base. [17]

Sri Lankan universities show student base which frequently perform very well in international IT competitions. The University of Moratuwa ranked first worldwide in 2007, 2008 and 2009 in terms of students receiving awards for free and open source development at the annual Google Summer of Code competitions, and now students from this university hold the most cumulative awards. Of 595 participating universities,

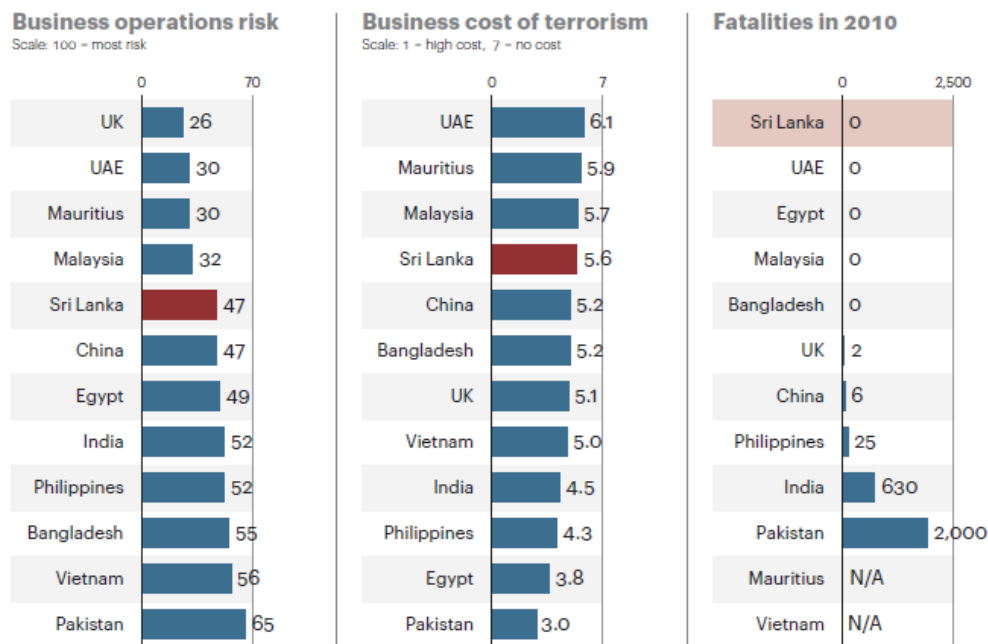
the university had the highest number of students accepted into the program in 2011. [17]

Sri Lankans possess in their soft skills. It is reported by executives from all over the world, that they are well known for friendliness, creativity, and adaptability to different cultures and environments, which results perfectly in easy integration into foreign operating units. These characteristics may be due to the fact that Sri Lankans are coming from a small island with a cultural melting pot history. [17]

Business Environment

Although there was a long-running conflict in the country and that has affected its image, overall business operations risk and terrorism risk is lower in Sri Lanka than in most of the benchmark countries. According to Economist Intelligence Unit, the business conditions risk profile in Sri Lanka is superior to the one in India, Bangladesh, Pakistan, Philippines and Vietnam. There is a confirmation that companies with operations in Sri Lanka never had to stop operations there, whereas they have suffered disruptions in most other locations because of industrial disputes, natural disasters, and terrorist attacks. [17]

Figure 4.9: Business and terrorism risk



Sources: Economist Intelligence Unit 2012, World Economic Forum Global Competitiveness Report 2011–2012, U.S. Department of State 2010; A.T. Kearney analysis

Source: A PETERSON, E., BELL, S., GOTT, J. *Competitive Benchmarking: Sri Lanka Knowledge Services*. A.T.Kearney, 2012.

The number of visitors to Sri Lanka grew almost 50% from 2009 to 2011. International arrivals in 2009 amounted 447,890 visitors, 654,476 in 2010, 855,975 in 2011 and crossed a significant milestone in 2012 with 1,005,605 visitors.¹³ The government's target is to attract 2.5 million tourists by 2016. Top hotel chains like Marriott, Shangri-La, Hilton, Ramada and Taj are planning new properties in Sri Lanka. The Sri Lanka Tourist Board has launched resort development project among others in Kalpitiya and Passikudah to channel investment and improve local tourism related infrastructure and supply chains. In 2010, The New York Times ranked Sri Lanka as the world's number-one travel destination, in 2011 National Geographic defined Sri Lanka as one of the 6 places to visit in 2012, mentioning its hill country, pristine beaches, and heritage sites. [17]

¹³ SRI LANKA TOURISM DEVELOPMENT AUTHORITY. 2012 Annual Statistical Report. Colombo: Sri Lanka Tourism Development Authority. 2013.

Sri Lanka's government offers tax incentives and import duties exemption for those that would like to invest in Sri Lanka. There are 4-6 years of tax holiday for small and medium investments, and up to 12 years for large-scale investments. If it is not export oriented, import duty exemption is applicable for capital goods. [22]

Usually it is economic growth and foreign direct investment (FDI) to be good indicators of overall stability and business confidence in a country. All this have already been analyzed in the previous chapter. Even during the conflict, investment didn't stop flowing into the country. Sri Lanka has attracted \$4 billion in FDI inflows over the past decade. As a result of the global downturn in 2009 FDI registered a slowdown, which was then quickly recovered to reach the usual levels in 2011. However, FDI represent only 0.1% of GDP while ideal would be 5% of GDP. [17]

Infrastructure in Sri Lanka is far superior to that found in other low-cost countries. Colombo is a relatively small capital city and therefore has far less congestion and pollution than most other fast growing capitals, and moving within the city is much easier than in Cairo, Dhaka, Manila or Mumbai. New national highway has been built from Colombo to the south coast and will extend to Hambantota where a new port, international airport, IT park, and other facilities have been completed. The highway is linked all the way to the airport in Katunayake north of Colombo and the government is planning to construct additional expressways linking Colombo to Jaffna and Trincomalee in the north and Kandy in the center of the island. This is much needed development since now the current infrastructure provides very troubled connection between most of the cities around the island. [17]

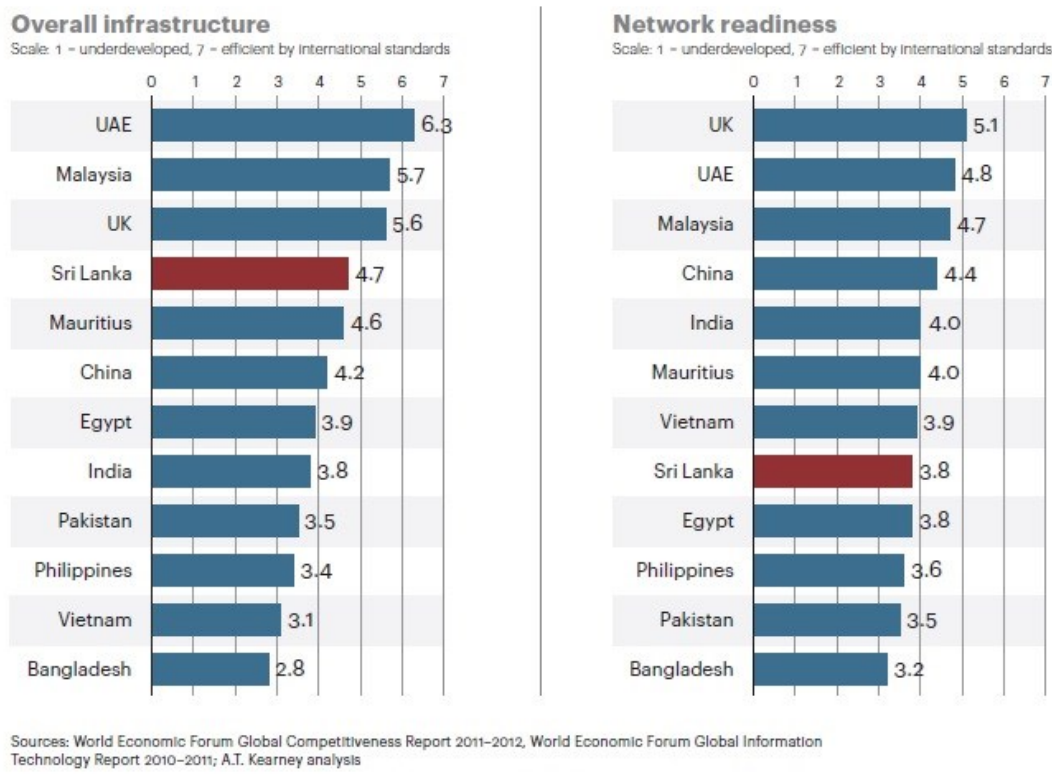
International air links are in an extensive amount, more than 20 international airlines operate out of Bandaranaike International Airport, which offers more flights to India than any other country – more than 140 flights per week. Most Indian cities are less than 2 hours away, which is a major advantage for companies with investment in this region. [17]

The telecommunications quality and sophistication is comparable to other countries in the region. There are nine telecom operators (four fixed line and five

mobile), 33 external gateway operators, 22 internet service providers, and four international submarine cables. Broadband, leased-line, and satellite connectivity are available. Sri Lanka was among the first South Asian countries to establish 3G and 4G technology. [17]

There are some negative factors as well. Government efficiency is not on a high level and Sri Lanka has bribery issues. Also the unpredictability of interest rates can cause that investors will lose their confidence in Sri Lanka's market.

Figure 4.10: Infrastructure quality

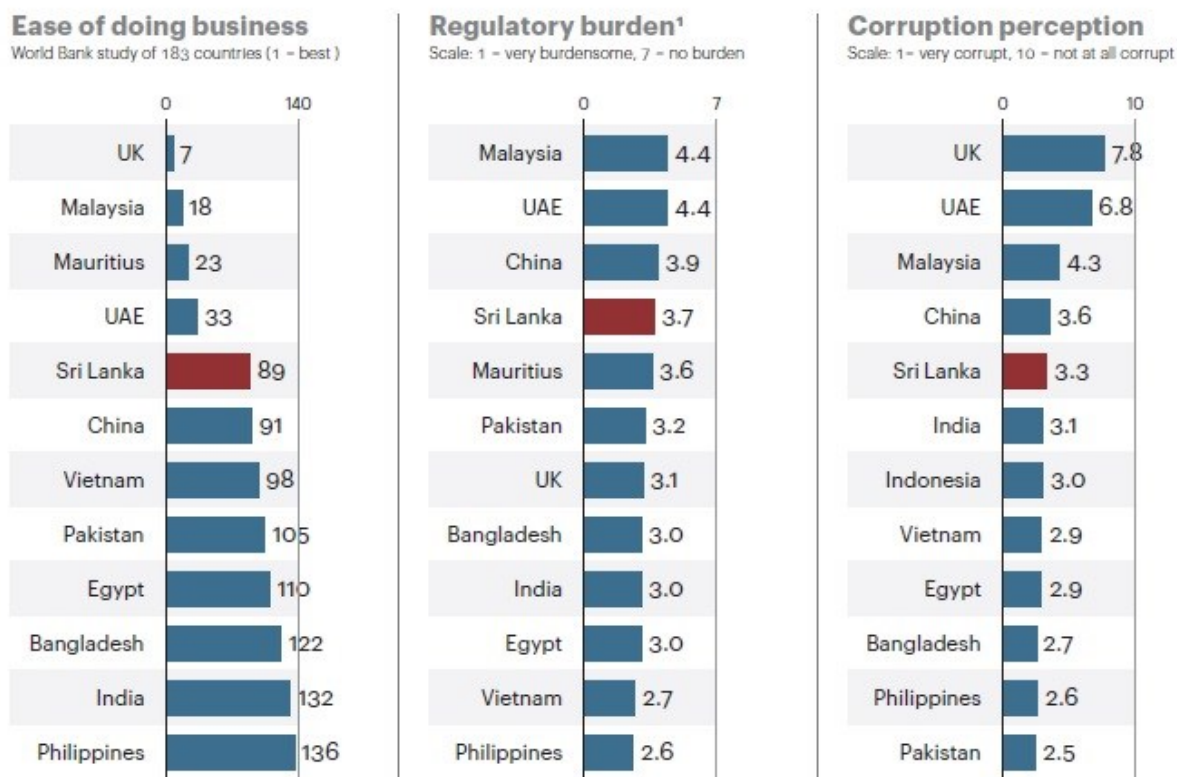


Source: A PETERSON, E., BELL, S., GOTT, J. *Competitive Benchmarking: Sri Lanka Knowledge Services*. A.T.Kearney, 2012.

After the conflict, the government took great pains to make the business climate welcoming to foreign investors. Sri Lanka was following pro-business and pro-investment policy since 1970, the country allows 100% foreign ownership in all sectors and places and no restrictions on repatriation of earnings, fees, or capital. As a result, its

regulatory environment is ranked well above India and Bangladesh. Sri Lanka scores pretty well in terms of overall flexibility in hiring, redundancy and working hours, but still lags far behind global best practices. Companies in the IT/BPO with 24/7 operations have obtained exceptions from regulations restricting holiday work and shift work, but wider reforms to bring more flexibility will be necessary if Sri Lanka wants to compete with Malaysia, Mauritius and Singapore. [17]

Figure 4.11: Business environment



¹ Refers to how difficult it is to comply with government requirements (permits, regulations, reporting).

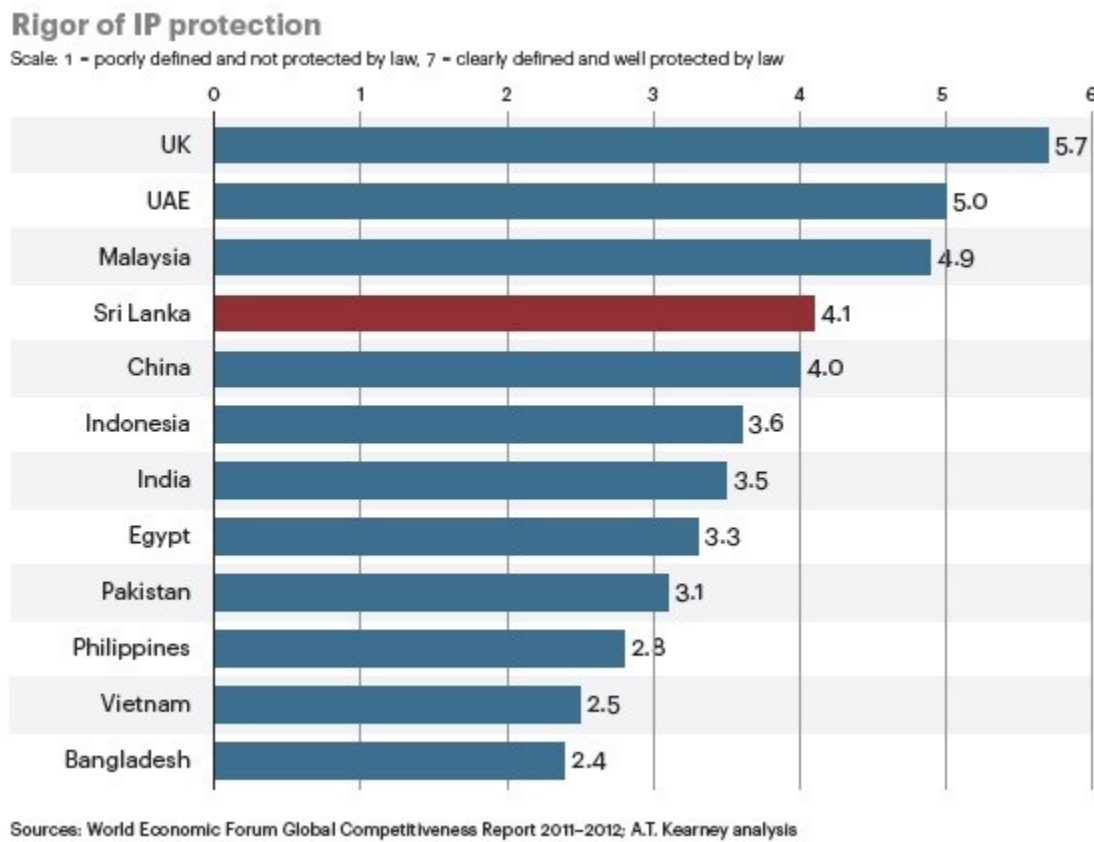
Sources: World Economic Forum Global Competitiveness Report 2011–2012, World Bank Doing Business 2012, Transparency International 2011; A.T. Kearney analysis

Source: A PETERSON, E., BELL, S., GOTT, J. *Competitive Benchmarking: Sri Lanka Knowledge Services*. A.T.Kearney, 2012.

Sri Lanka has among the most rigorous intellectual property (IP) protection regimes in the region, industry stakeholders do not mention IP as a concern for business-to-business products, and many companies stated that they have chosen Sri

Lanka over India because of a perception of higher information security. Sri Lanka has created a national intellectual property rights office that focuses on awareness, policy issues, and enforcement. [17]

Figure 4.12 Intellectual property protection



Source: A PETERSON, E., BELL, S., GOTT, J. *Competitive Benchmarking: Sri Lanka Knowledge Services*. A.T.Kearney, 2012.

4.3. Vision for the future

4.3.1. Making Sri Lanka the future ICT Hub of South Asia

This vision was defined by Madu Ratnayake (General Manager of Virtusa and Chairman of SLASSCOM) on behalf of SLASSCOM during an interview.

SLASSCOM had set up three goals to be achieved by 2022:

1. \$5b revenue
2. 200,000 jobs
3. 1000 startups

According to Madu Ratnayake, with a determined focus on these three targets and carefully selected actions, it is possible that Sri Lanka could reach a status of the ICT Hub of South Asia. The three targets will require focus and action from all stakeholders to turn them into reality.

In addition to the Competitive *Benchmarking: Sri Lanka Knowledge Services* study executed by A.T.Kearney, Madu points out few more advantages and reasons why Sri Lanka could become the ICT Hub of South Asia.

In general, all countries are more connected nowadays, that is thanks to the ICT, and it applies to emerging Asia as well. The mobile penetration in the region is almost 100% in most of the countries. This brings a huge accessibility to the consumer.

Madu mentioned additional competitive advantages for Sri Lanka. The most important one is, that Sri Lanka has trade agreements with most of the countries in South Asia, and with many in Asia. This fact makes Sri Lanka an ideal location for setting up companies or offices. This can be a competitive advantage for instance in case of companies planning to do business in Pakistan. This is an advantage Sri Lanka has above India, because the relations between India and Pakistan are not well, while Sri Lanka has free trade agreement with Pakistan, called PSFTA (Pakistan-Sri Lanka Free Trade Agreement) since 2005. This can be leveraged to increase the potential Sri Lanka has in becoming the center in this area.

There are two main areas where Sri Lanka shows major competitive advantages. One in offering IT/BPO services, the second one being for development and incubation of new products.

Product Companies

This is the main opportunity for Sri Lanka for various reasons. While giants like India or the Philippines can offer high scale low cost environment, Sri Lanka with its

current workforce and rising prices that go together with the middle-income economy transition, has to offer something different. The large scale cost savings is the major decision-making factor for mainstream business process outsourcing.

Sri Lanka is different with its talent pool, which has higher knowledge skills. But the main competitive advantage this sector can offer is the knowledge of the region. Multinational companies mainly from the US are leading the market, but have more difficulties to adapt the completely different South-Asian market, than local companies do. For example a comprehensive ERP (Enterprise Resource Planning) system like SAP is too high-level for a local hospital in Vietnam, which can be intimidating. They need a simple system that does necessary functions, and is easy to learn, since the employees in Vietnam will be on a different computer literacy level than those in developed world. Things built in the region work extremely well in the region.

In addition to this, there is another problem of how this huge corporation going to reach to potential clients in this sense. It is local companies who are aware of this kind of demand, and know exactly the local needs. They will build a more simple ERP system which will fulfill local requirements easier and faster than world's top ERP systems.

Innovation and differentiation is the potential in this region. There are more examples, such as Flipkart, an Indian e-commerce company founded in 2007. There are many opportunities in all areas, mostly in health care, education, etc. There is also a strong IP (Intellectual Property) built by these companies in Sri Lanka which has significant value. The product development brings another positive factor which is

This is just an example of the potential product companies based in the region can have, and it is Sri Lanka with its mix of labor costs, talent pool, business environment, tax incentives, trade agreements and geographic location, who is the ideal destination for this companies to set up. This applies to already existing companies with intentions to expand to local markets, as well as new startups in Sri Lanka. Through the startups initiative by SLASSCOM and the government it is an opportunity how to encourage entrepreneurs from Sri Lanka's talent pool to start their own business in this sector, and to attract potential entrepreneurs from abroad. A middle-income economy

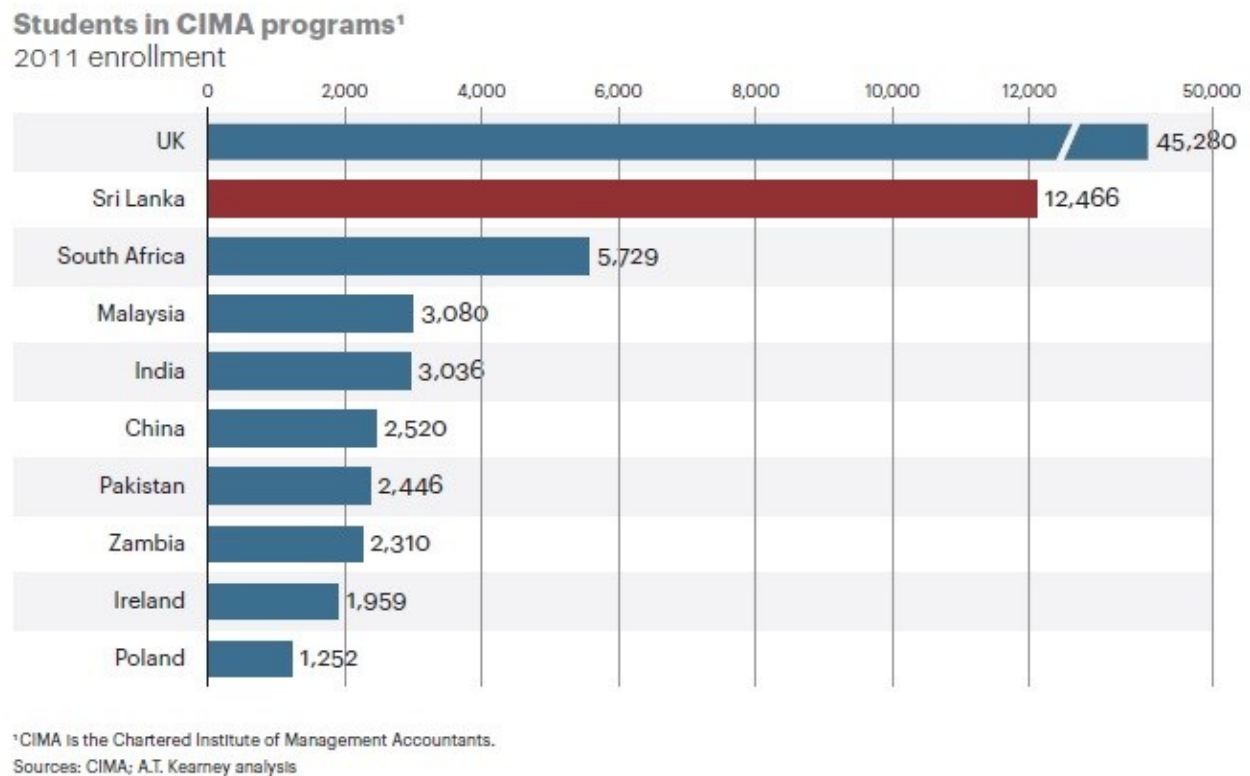
country needs to have wide middle-income households, and it is entrepreneurship that builds strong foundation for this middle class.

IT/BPO Services

IT/BPO services is the area where are giants like India or the Philippines the global leaders due to large scale low cost environment. Sri Lanka has to leverage its advantages for niche markets thanks to the fact of being the knowledge hub. These niche areas are financial and accounting outsourcing.

As seen in the following figure, Sri Lanka offers the highest number of certified accountants outside UK and their qualities are on a high level.

Figure 4.13.: Sri Lanka's niche in finance and accounting outsourcing



Source: A PETERSON, E., BELL, S., GOTT, J. *Competitive Benchmarking: Sri Lanka Knowledge Services*. A.T.Kearney, 2012.

Thanks to this quality of labor force, Sri Lanka can attract customers even in situation when the costs are slightly higher than in other IT/BPO markets (India, Philippines).

The strategy of leveraging the biggest potential of the IT/BPO services sector is through partnerships between countries on a government level. Offering a high quality of workforce itself will attract some demand, but the potential will not be maximized without cooperation between governments and real incentives.

The particular strategy Sri Lanka has is cooperation with the major existing partners, which is UK, Australia, and emerging Asian region. UK has always been major export market for outsourcing services, and there are already partnerships and cooperation activities existing. Australia offers a similar export market characteristics as UK and US, but is very similar to Sri Lanka with its size.

The new emerging partnership negotiations are currently going on with Japan. Japan-Sri Lanka relations have always been on a good level, Japan is providing official development assistance to help Sri Lanka's needs, but there is no free trade agreement yet. Japan contracted a lot of outsourcing services with China, but this trend is decreasing.

Madu explains this opportunity the following way. Japan and Sri Lanka show similar patterns in many areas such as, size of the country, Buddhism, both countries are long term oriented.

Japan and Sri Lanka both prefer long term relations over aggressivity about results and cost savings, both focus more on sustainability. 10% higher costs leveraged by good relations, credibility, overall experience and better talent pool could be the option for Japan.

India, for example, has good relations with US based on the same model. Both countries show similar patterns and this relationship works well. Both countries are big, they strive for results, and change partners more often.

4.4. The direct influence of the IT industry on Sri Lanka's economic development

Here is an example of the attention government and private sector is paying towards an ICT development of Sri Lanka.

IT Enables a level playing field and opportunities to all communities across Sri Lanka. The government had declared year 2009 at the year of IT & English. There were various activities executed aimed at improving country's standards of English and IT literacy among the general public. [31]

Brandix, MIT Global Startup Labs, and SLASSCOM partner to drive start-ups in order to achieve 2022 goals of introducing 1000 new startups. Brandix will provide funding for the next 5 years, MIT Global Startup Labs have experience of helping start-ups globally and was pioneered in Sri Lanka by the University of Moratuwa.

4.5. The influence of the IT industry on the economic development of the northern part of Sri Lanka

The influence of the ICT industry on the development of the northern part of Sri Lanka is very difficult to measure. I decided to look at it from the point of view of one case study from the private sector companies, and from the point of view how the government agencies or other associations influence the development. The case study will be about a company called Virtusa, which is a leader and the biggest IT company in the Sri Lanka's ICT sector, and therefore it can be considered as a model study representing the practices of this sector.

Denver De Zylva (Head of Strategic Sustainability Initiatives; Virtusa) answers the question of what is the role of ICT in the process of economic development of the affected provinces.

"With the ending of the LTTE Terrorism in May 2009, The freedom of movement and interaction of the populations across the country enabled all communities to interact with each other and ICT was one of the key enablers in this ongoing process. Today

people from all areas in the North and East have unrestricted access to resources, education and employment opportunities across the country and in the ICT industry.”

4.5.1. Virtusa Case Study

Virtusa is a NASDAQ-listed company headquartered in US with operations in Colombo since 1995. It has been founded in the same year by a Sri Lankan citizen Kris Canekaratne. Virtusa provides IT services to leading Global 1000 customers in financial services, insurance, telecommunications, health care, and capital markets. The company has 2,500 employees in Colombo (8,000 globally). The second biggest company operating in Colombo is IFS with 1,000 employees. [17]

Denver De Zylva (Head of Strategic Sustainability Initiatives; Virtusa) now answers a question of what is the role of Virtusa in the process of economic development of the affected provinces. “Today,” Denver continues, “we have a number of university students as ICT interns and graduates from the University of Jaffna & Vavuniya Campus in the North and from the Eastern University in Batticaloa & Trincomalee in the East that freely come to work at Virtusa. The good employment opportunities enable them to support their families in the North & East and to encourage others on this path of economic development and prosperity.” Later on, Denver adds: “Virtusa also has many inter-university competitions and activities.”

Projects

Virtusa has various CSR projects that help the development of the northern part of Sri Lanka. The biggest one is the development of the Rehabilitation Management System for the Bureau of Commissioner General of Rehabilitation in Sri Lanka. This project was published in a case study for United Nations Global Compact which was presented by Rasika Withanage (Head of Marketing, Sustainability and Communication; Virtusa) in the *UN Global Compact Leaders Summit 2013* in UN Headquarters in New York. [29]

When the ethnic conflict ended in 2009, the Bureau of Commissioner General of Rehabilitation (BCGR) in Sri Lanka was tasked with the reintegration of ex-combatants

with the civil society in order to contribute to sustainable peace in the country. Successful reintegration required equipping the ex-combatants with the education and skills as well as providing suitable vocational training. The BCGR not only required assistance with providing the required training but also in maintaining rehabilitee information and matching available training programs with their skills and abilities. Virtusa developed the Rehabilitation Management System (RMS) to help track the details of ex-combatants, their educational and vocational training needs, and their rehabilitation progress. [29]

In addition, Virtusa donated a fully equipped digital learning center (DLC) to facilitate IT training for the ex-combatants. Following the completion of the rehabilitation program, the DLC was handed over to the Vavuniya Campus of the University of Jaffna. This enables long term development of the North and East by providing students the opportunity to follow IT at degree level. It also builds up the pool of IT graduate and contributes to the development of the IT/BPO industry, which has become the fifth largest foreign exchange earner for the country bringing in much needed revenue to Sri Lanka. [29]

The impact of this project is giving a training and education to approximately 12,000 war ex-combatants who were not able to complete their education because of the conflict. There were specific issues as focusing on providing the same education to female ex-combatant, and rehabilitation of child ex-combatants needs special attention since they have been denied basic rights such as education and the right to grow up with their families. Project attempted to create a brighter future for a large number of marginalized youth, who would otherwise have only limited education and resources. [29]

After the rehabilitation process was completed, the Digital Learning Center was handed over to the Vavuniya Campus of the Jaffna University to be used to enhance the education and needs of the IT faculty. This will contribute to the development of IT education in the North and East of Sri Lanka and helps to increase the pool of IT graduates from that region. [29]

This is just an example of many projects managed under the program called Digital Reach, through which Virtusa aims to create a digitally inclusive society by IT enabling communities. Digital Reach also helps to set up IT labs in rural schools in Sri Lanka. The Digital Reach model was adopted by the Sri Lanka Association of Software and Service Companies (SLASSCOM) for a country wide community outreach program. [21]

Other initiative is Campus Reach which is an industry-academia partnership designed to support the next generation of IT professionals to be workforce ready, and thereby, contribute to the growth of the IT/BPO industry. Through this program Virtusa provides internships (121 in 2013, more than 700 in total), Career guidance and awareness sessions (12 in 2013), Tech Talks (16 in 2013), Excellence awards (5 in 2013), and Industrial visits. Denver De Zylva also mentions this initiative during the interview: “Virtusa Campus reach is one such initiative that is ongoing to reach out to the Uni Students in the North & East.” [21]

In addition, there is one more program called Virtusa Tech Reach. The mission is to utilize Virtusa’s software development and consulting expertise to contribute to projects of social benefits. Akura is one example, which is open source school management system in order to help schools manage their administrative tasks more efficiently. The mission of Akura is to apply information technology to help improve teaching capacity and quality. [21]

Other Tech Reach initiative is Sahana. 80+ Virtusa volunteers built the coordination portal for the Government of Sri Lanka (CNO) within two weeks of the 2004 tsunami. Sahana has been contributing for public good since then. Sahana is now being extended as an epidemic management system for the Ministry of Health in Sri Lanka. Sahana also became world-class disaster management system that has been implemented in the Japanese earthquake, hurricane Sandy in New York, and most of the significant disasters around the globe. [21]

4.5.2. The influence of government initiatives

ICTA (Information and Communication Technology Agency of Sri Lanka) works on a development project called eSri Lanka. There are projects in 6 interdependent programs, each designed to address a key area in the eSri Lanka development project: ICT policy, Leadership and Institutional Development; Information Infrastructure; Re-engineering government; ICT Human Resources Capacity Building; ICT Investment and Private Sector Development; eSociety. [16]

ICTA provides leadership in the application of ICT to achieve major economic, developmental and social improvements in Sri Lanka. ICTA states that it is now necessary to take ICT to the areas that have been inaccessible until now, such as the northern and eastern parts of the country. There are several trainings going on for the government of northern provinces. [16]

Nenasala project communication centers are being built by the government in rural areas to help fight poverty, develop culture and commerce, and sustain peace. There are currently 765 Nenasala centers in the country, many of them in the northern provinces, the recent ones in 2012 in Anuradhapura, Kilinochchi, Mullaitivu, Pollonaruwa. A feasibility study was carried out to identify viable locations for establishing 40 Nenasala centers in the Northern Province in the Jaffna, Kilinochchi, Mannar, Mullaitivu and Vavuniya districts. [25]

A lot of projects are going on, there are new ICT training centers in Anuradhapura and Trincomalee. A conference about ICT/BPO competitiveness was going on. [16]

Re-engineering government is a program that pursues sustainable improvements in Government organizations' efficiency, effectiveness, and quality of services. There is a project that aims to connect seven districts in the north with the Lanka Government Network. This will include 75 Government organizations in the Northern and Eastern Province. [16]

ICT skills and system administration skills trainings were held in the districts of major cities in the north. During 2012 the ICTA installed several fully equipped training

centers in the Northern Province, North Central Province, and the Eastern Province. These centers will provide training for Government officers, rural school children and teachers. [16]

As seen, there are several projects going on, and the focus on developing ICT in the northern provinces is significant. The target of all these is to help the development of the north through ICT. Government coordinates all the activities with this objective through ICTA's eSri Lanka program. [16]

5. Proposition on maximizing the potential of the IT industry towards an economic development of Sri Lanka

The ICT industry may not seem that significant on the first sight on the statistics, but it can be a game changer for Sri Lanka's economy and the transition to a middle-income economy stage. It can become a driver that will take Sri Lanka's economy even further to achieve upper-middle-income economy status in the long term. However, there are many factors and variables that will define the future growth and development of this industry and whether it will become a game changer or not. In order to achieve great results, all stakeholders must do their best and coordinate with each other.

If all this will be done properly, ICT/BPO industry can be the key sector which will set up a base towards sustainable economic growth. Sri Lanka's economy has a great inadvantage, which is its significant dependency on imports. 50% of the import bill are capital goods and oil. If a country starts growing on a rapid pace, the consumption of oil and capital goods increases, and unless there is a balance on the export side, the country hits a reserve crisis, which happened in 2012. There are also several external forces that can bring a lot of trouble to import-dependent Sri Lanka, such as rise in oil prices (oil represent a huge part of the import bill). In addition, Sri Lanka's debt consists of high level of commercial borrowings at high interest rates. To sustain an economic growth, Sri Lanka needs to build a strong export base.

If the ICT/BPO sector becomes more significant component on the exports account, together with its growth it can drive restructuring the balance of payments, and this way influence the whole economic growth. The way, how the ICT/BPO sector can become more significant and continue its sustainable growth, is explained in the competitiveness study.

Through influencing the economic growth, the sector can be one of the drivers that will bring prosperity to less developed regions of Sri Lanka, mainly the northern provinces. Thanks to economic growth, government will be able to spend more resources on developing the northern provinces as well and together with good policies can speed up the development towards erasing existing inequalities.

Last, the development is influenced through direct activities of the ICT/BPO sector, it can be activities done by companies, or it can be projects or programs run by the Government or its agencies.

My proposition is divided into three areas. The first one is proposition in regards of economic policies and building growth in a long-term perspective. The second area consists of how the IT/BPO sector contributes on the external sector of Sri Lanka and how to maximize this sector's potential. This part is based on the competitiveness study executed by A.T.Kearney. The last area consists of economic development of the war-affected northern part of Sri Lanka, and what is the potential this IT/BPO sector has in helping this critically needed development.

5.1. The economy of Sri Lanka

Sri Lanka has a good chance to get on a way towards prosperity, but there are certain areas where a step in a wrong direction would mean a pain of a steep fall. Also a gust of wind that is beyond the country control could lead to adverse consequences.

The main concern is business environment. The business community remains uncertain about the future direction of interest rates or exchange rates. Suresh Shah (Chairman of the Ceylon Chamber of Commerce) says that „When predictability is compromised, the business community tends to lose confidence.“ Taxation is another problem, there might be too many taxes and a system that is not strong enough to ensure everyone pays them. Sri Lanka needs to broaden the tax base, and it should be done having reasonable tax rates and getting more people in the net. Applying on the current situation, the Government should use modern technology in order to ensure everyone is paying the tax. On the other hand, the tax incentive system to attract investors and startups is on the right track.

Suresh also points out another major problem within Sri Lanka's business environment, which is bribery and corruption: „There are pressures that compel even honest business-people to pay bribes. If we have strong institutions and systems in place, bribery and corruption could be dismissed.

The monetary policy and government focus on slowing down the over-heating economy right after the conflict was the right thing to do. The GDP growth rate should be around 6-7% and stay there. It is also good that the Government is focused on fiscal consolidation, but the challenge is to do this while investing more on infrastructure, education and health care. Sri Lanka needs to improve the island's road network, mainly the north-south highway is necessary. Sri Lanka can become small place, get people to work together with each other and this infrastructure can take prosperity to the region.

At the moment current investments into infrastructure rely on borrowings. The new way of doing it is to start partnership of the public and private sector, (Public-Private Partnerships – PPFs)

Sri Lanka needs to attract approximately 5% of GDP as FDI. Current FDI is around 0,1% in past few years. To attract FDI while being a small market, Sri Lanka needs to offer a business environment with advantages in comparison with main competitors.

Sri Lanka has a chance of taking an example from the Four Asian Tigers (Singapore, Hong Kong, Taiwan, South Korea), mainly from Singapore. These four countries were growing on a rapid pace for a long period thanks to strong export oriented policies. There were several similar patterns all these countries followed in order to sustain strong growth. Singapore have become world-leading international financial center, which is together with electronics exports the main driver of its economy. The creation of stable macroeconomic environment was the key for this sustainable growth. Each of these four states managed to some level three variables: budget deficit, external debt and exchange rates. [6]

Coming to macroeconomical stage of Singapore is for Sri Lanka very challenging task, but the main idea is, that Sri Lanka can use the ICT/BPO industry as the main driver of its export growth, and to attract FDI. The adequate pro-business policies are necessary to achieve this, but the potential is there.

5.2. Contribution of the IT/BPO sector on the external sector of Sri Lanka

The calculations I made give a decent idea of the importance of the IT/BPO in the exports composition. It is already a long time that this sector was developed in Sri Lanka, and there is already some tradition among existing companies and a good talent pool. However, as the A.T.Kearney competitiveness analysis shows, the CEO of multinational companies are still not well aware of the option of choosing Sri Lanka as their outsourcing partner, and this must change. The growth of this sector shows that it is already changing, many global leading ICT companies already have their centers in Sri Lanka to diversify their locations next to India. Among these companies is Accenture, Intel, Microsoft, and others.

5.2.1. Export revenue growth

The hardly believable growth in 2010 of ICT/BPO exports of almost 50% right after the civil war was ended clearly indicates that as soon as the business climate gets better, the demand is there. Of course this growth of ICT/BPO services is hardly sustainable, in my opinion the growth of 20% which is currently set up, is very likely to continue to fulfill the industry goals in 2016 and reach \$1 billion of export revenues.

However the goals set up by SLASSCOM to reach \$5 billion in ICT/BPO export revenues by 2022 would be growth of \$4 billion in just 6 years with an average annual growth of 35% which in my opinion is very optimistic. I would project a sustainable growth of 22% which is set up until 2016 to be able to reach the \$1 billion target, and if this growth pace continues until 2022, the ICT/BPO export revenues will be \$3.3 billion which is a great growth as well. Considering that at this moment the export revenues are at \$600 million, it would mean more than 5.5 times more.

5.2.2. Talent pool

I could experience the quality of the workforce by myself while working with the most talented IT graduates for one year. As it was mentioned before, University of

Moratuwa, where most of the current freshly graduated software engineers come from, has the highest number of participants in the Google Summer of Code from all the universities around the world. This fact shows the level that is currently set up in Sri Lanka's IT education system.

The connection between industry and universities is very good, there are plenty of activities, seminars, trainings, awards, tech talks, and internships. During this program, students get the chance of interacting with the industry professionals and after graduation they are well prepared for entering the labour market.

The focus on setting up IT labs in schools around the country in order to raise computer literacy is a great idea. It is producing high number of kids with basic understanding of the technology, and more of them will pursue the studies in ICT.

If the ICT/BPO industry grows, it brings together an increasing demand for skilled IT engineers which needs to be satisfied. In order to do that, Sri Lanka needs to produce much more IT engineers than the current capacity allows. I would recommend to increase the capacity of IT engineering majors at universities. The most beneficial would be increasing the capacity in University of Jaffna to bring opportunities to tamil students from the northern provinces. Other good solution would be building IT engineering campuses of existing universities (for example University of Moratuwa) in the northern provinces.

5.2.3. Competitiveness of the ICT/BPO industry

The study executed by A.T.Kearney *Competitiveness Benchmarking: Sri Lanka Knowledge Services* reveals great competitive advantages by the ICT/BPO sector on a global and regional scene. There is nothing more to propose than to take this potential and use it towards sustainable growth of the industry.

Leveraging the advantages in the niche market of financial outsourcing will be the most effective through partnerships on government level. As it was defined by Madu Ratnayake (General Manager of Virtusa, and Chairman of SLASSCOM), UK, Australia

and Japan should be the target markets for outsourcing services fueled up by these partnership agreements.

Encouraging startups in the product development and innovation segment is also a great way to maximize the potential. These companies should focus their products on the needs of the local as well as Asian market and compete that way with high-level products developed first for western markets with different needs.

My idea is to brand Sri Lanka as a country that needs to help faster development of the war affected northern provinces. The results of this thesis could be used as an example of how the ICT industry helps and influences a development of very badly affected areas, where the help is really needed.

The companies making a decision of their location in the low cost countries, next to other unquestionable advantages, if they would see how big is the impact they can help to achieve by being a part of an industry with this kind of influence. That by choosing Sri Lanka as a location of their operations they can actually help so many people and a development of areas destroyed by war. It is not CSR, but it can bring a lot of positive awareness to companies with operations in Sri Lanka. This significant meaning will not be in other countries because of the following reasons. Sri Lanka's northern provinces are affected by war and are in need of rebuilding. Sri Lanka's economy can be significantly influenced and driven by growing ICT/BPO industry, therefore there is huge impact. Why not to be a part of it. Branding Sri Lanka as a location that can provide impact of this dimension can be worth it.

5.3. The economic development of the war-affected northern part of Sri Lanka

I see the influence on the economic development of the northern provinces of Sri Lanka in two ways. The first way is through influencing the economic growth of Sri Lanka which will affect the growth and development in all the regions within the country.

In addition to the overall economic growth in the whole country, if the ICT/BPO industry grows and creates more job opportunities, it will influence the development as

well. If the companies identify the opportunity among tamil inhabitants of these provinces and build offices or IT centers there, the influence is unquestionable.

Next to this indirect influence through an economic and sector growth, there is also direct influence through activities, projects and programs executed by private companies, associations or government agencies. This influence is also unquestionable since it has a direct impact on the targeted segment. The mentioned CSR projects by Virtusa are a great example of how private companies can make an impact in such problematic areas.

The only proposal could be of encouraging companies to build offices and centers in these provinces in order to have better access to the talent pool, and encouraging the University of Jaffna and other universities to increase the capacity in IT engineering majors, so the prospective students do not have to go to Colombo, and even more students get an access to the tertiary education. Increasing computer literacy among kids at schools is a great initiative with significant future impact.

6. Conclusion

It was very challenging problematic since the beginning of my research. It was difficult mainly because there are no similar studies of how the ICT industry would influence an economic development of a country. The second factor is that Sri Lanka is a country with very unlucky historical evolution. It has been only 5 years since the 26-year long war against the terrorist group LTTE ended and left part of the country in a bad shape. It was a challenge to analyze how the ICT sector influences the development of these destroyed areas that need to grow to the level of Colombo and the southern part of the island.

However, I managed to come to a conclusion, that the ICT sector has a significant influence on the economic development of Sri Lanka. Based on the competitive advantages this sector has on a global scene, there is a realistic potential that its growth will continue in a yearly pace of around 20%. Thanks to this growth, the ICT sector will become more relevant composer of total exports and with time will be able to help restructuring the external sector balance of payments. Sri Lanka needs to build strong export base more than anything else in order to sustain economical growth.

There is a good chance Sri Lanka will manage to achieve this and will become a prosperous economy in the future, however there are certain areas that need attention. The bribery and unpredictable interest rates make business climate less attractive for investors and once they loose confidence, it's difficult to gain it back. Fiscal consolidation needs to continue, FDI needs to grow from current 0.1% to ideal 5%, and taxation needs to be supervised more effectively. A step in a wrong direction can cause a steep fall away from the potential Sri Lanka has now.

If all this will be succesfully applied, Sri Lanka can follow more decent version of the Singapore's growth model, this one can be based on strong ICT sector exports.

The influence ICT sector has on economic development of the northern provinces can be defined in two ways, one is indirectly through economic growth of the whole country, and the second one is through activities and projects that have direct impact on

the particular target segment. There are many projects executed by private companies, associations or government bodies and agencies.

I could finalize the research with several proposals. In regard of the economy situation, as it was already mentioned in the conclusion, Sri Lanka should focus on solving bribery and unpredictable interest rates, bringing more FDI, building strong export base, and also on Public-Private-Partnerships for the needed infrastructure, education and health care investments.

Madu Ratnayake's vision of focusing on the niche of financial and accounting outsourcing services and build strong partnerships on government levels with UK, Australia, but mainly Japan is a great approach as well as focusing on product development and innovation for target markets in the Asian region. I think branding Sri Lanka as a location where companies directly influence the development of much needed areas in the northern provinces can be a great motivational factor of attracting new investors.

Last, but not least, I proposed to attract companies to open offices or technology centers in the northern provinces in order to have an access to local talent pool. This could create jobs, bring investments and fuel the economy in these provinces. As well as companies I would encourage universities, mainly University of Jaffna to offer higher IT engineering majors capacity in order to increase the future workforce, but mainly to bring a perspective of a better life to the kids in the north.

References

Monography

1. ADAMCOVÁ, Lenka. *Rozvojová ekonomika*. Vyd. 1. Praha: Oeconomica, 2009, 345 s. ISBN 978-80-245-1515-1.
2. *Annual report of the Monetary Board to the Hon. Minister of Finance for the year 2012*. Colombo: Central Bank of Sri Lanka, 2013. ISBN 978-955-5752-602.
3. ARMSTRONG, Harvey a Jim TAYLOR. *Regional economics and policy*. 3rd ed. Oxford: Blackwell Publishing, 2000. ISBN 06-312-1713-4.
4. BELL-FIALKOFF, A. *Etnické čistky*. 1. vyd. Praha: Práh, 2003. 327 s. ISBN 80-7252-070-9.
5. CAMERON, R. *Stručné ekonomické dějiny světa: Od doby kamenné do současnosti*. Praha: Victoria Publishing, 1996. 475 s. ISBN 80-85865-21-1.
6. DE SILVA, K. M. *A history of Sri Lanka*. London: C. Hurst & Co, 1981. 603 s. ISBN 0-905838-50-5.
7. *Economic and social statistics of Sri Lanka 2013*. Colombo: Central Bank of Sri Lanka, Statistics Dept, 2013. ISBN 978-955-5752-657.
8. EDITORS, Stanley Fischer and Julio J. *NBER macroeconomics annual 1994: globalization, institutions, and economic growth*. 9th ed. Cambridge, Mass: MIT Press, 1994, xvi, 1052 p. ISBN 978-026-2560-801
9. FILIPSKÝ, Jan. *Dějiny Bangladéše, Bhútánu, Malediv, Nepálu, Pákistánu a Šrí Lanky*. Vyd. 1. Praha: Nakladatelství Lidové noviny, 2003, 471 s. Dějiny států. ISBN 80-7106-647-8
10. INSTITUTE OF POLICY STUDIES OF SRI LANKA. *Sri Lanka State of the Economy 2013*. Colombo: Institute of Policy Studies of Sri Lanka, 2013. ISBN 978-955-8708-77-4.
11. NAFZIGER, E. W. *Economic Development*. 4. vyd. New York: Cambridge University Press, 2006. 868 s. ISBN 978-0-521-82966-3.
12. RODRIK, Dani. *One economics, many recipes: globalization, institutions, and economic growth*. 1st Publ. Princeton: Princeton University Press, c2007, xi, 263 p. ISBN 06-911-2951-7.

13. STIMSON, R., STOUGH, R and ROBERTS, B. *Regional economic development: analysis and planning strategy*. 2nd ed. New York: Springer, c2006, xiv, 452 p. ISBN 35-403-4826-3.
14. VARADZIN, František. *Ekonomický rozvoj a růst*. Praha: Professional Publishing, 2004. 330 s. ISBN 80-86419-61-4.
15. WOKOUN, R., MALINOVSKÝ, J. *Regionální rozvoj: (východiska regionálního rozvoje, regionální politika, teorie, strategie a programování)*. Praha: Linde, 2008, 475 s. ISBN 978-807-2016-990.

Magazines

16. INFORMATION AND COMMUNICATION TECHNOLOGY AGENCY OF SRI LANKA. *Annual Report 2012*. Colombo: Information and Communication Technology Agency of Sri Lanka, 2013.
17. PETERSON, E., BELL, S., GOTT, J. *Competitive Benchmarking: Sri Lanka Knowledge Services*. A.T.Kearney, 2012.
18. PRICEWATERHOUSECOOPERS. *ICT Export Value Survey 2010*. Colombo: Sri Lanka Export Development Board, 2011.
19. SECURE LIVELIHOODS RESEARCH CONSORTIUM. *Resettlement of conflict-induced IDPs in Northern Sri Lanka: Political economy of state policy and practice*. London: Secure Livelihoods Research Consortium, 2014, Working Paper 10.
20. SLASSCOM. *Forward Newsletter*. Colombo: SLASSCOM, October/2013, issue 14.
21. VIRTUSA. *Sustainability Report 2012/2013*. Westborough: Virtusa, 2014.

Electronic references

22. BOARD OF INVESTMENTS OF SRI LANKA. [online]. 2014 [cit. 2014-04-23]. Dostupné z: <http://www.investsrilanka.com/>
23. Foreign Terrorist Organizations. U.S. DEPARTMENT OF STATE. [online]. 2014 [cit. 2014-04-24]. Dostupné z: <http://www.state.gov/j/ct/rls/other/des/123085.htm>

24. History of Sri Lanka. SRI LANKA TOURISM PROMOTION BUREAU. [online]. 2014 [cit. 2014-04-24]. Dostupné z: http://www.srilanka.travel/history_of_sri_lanka
25. INFORMATION AND COMMUNICATION TECHNOLOGY AGENCY OF SRI LANKA. Nenasala [online]. 2014 [cit. 2014-04-24]. Dostupné z: <http://www.nenasala.lk/>
26. The World Factbook. CENTRAL INTELLIGENCE AGENCY. [online]. 2014. [cit. 2014-04-24]. Dostupné z: <https://www.cia.gov/library/publications/the-world-factbook/geos/ce.html>
27. Sri Lanka profile. BBC News. [online]. 2013. [cit. 2014-04-24]. Dostupné z: <http://www.bbc.com/news/world-south-asia-11999611>.
28. Sri Lanka to Receive \$415 Million IMF Loan. BLOOMBERG. [online]. 2012 [cit. 2014-04-24]. Dostupné z: <http://www.bloomberg.com/news/2012-07-20/sri-lanka-to-receive-415-million-imf-loan.html>

Others

29. Virtusa internal documents.

List of abbreviations

BPO – Business Process Outsourcing

ERP – Enterprise Resource Planning

FDI – Foreign Direct Investment

GDP – Gross Domestic Product

HR – Human Resources

ICT – Information and Communication Technology

IMF – International Monetary Fund

IT – Information Technology

KPO – Knowledge Process Outsourcing

LTTE – Liberation Tigers of Tamil Eelam

Rs – Sri Lanka Rupee

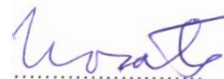
SLASSCOM – Sri Lanka Association of Software and Service Companies

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Adam Nosálek